

The New York Medical Times

VOL. XXII.

NEW YORK, AUGUST, 1894.

No. 8.

ORIGINAL ARTICLES.

PULMONARY PHTHISIS AND THE CARE OF CONSUMPTIVES.

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THAT most important and most difficult of sanitary problems—how to prevent, and, if possible, to “stamp out” pulmonary phthisis, or tuberculosis, as it is now more scientifically called—has lately attracted a great deal of attention throughout the medical world. In England, some of the local boards of health have petitioned the local government board for sanction to include pulmonary tuberculosis as a disease notifiable under the provisions of the infectious diseases act. The whole question of tuberculosis is now under the investigation in England of a royal commission. In this country it has been taken up by some of the local boards of health, and has been pretty thoroughly discussed during the last winter by several of our medical societies, notably in this city and Philadelphia. In the latter city the College of Physicians held a special meeting last January to consider the proposed action of the Board of Health in reference to the registration of tuberculosis. The following amended form of a resolution offered by Dr. L. F. Flick came under consideration :

WHEREAS, Tuberculosis is now known to be a contagious disease ; and

WHEREAS, The methods by which the disease is conveyed from the sick to the well are now clearly understood ; and

WHEREAS, It has been shown that the room which is occupied by a consumptive during the infectious period of the disease, and the furniture and the bedclothing which have been used by him, become infected, and are liable to convey the disease to others who may occupy or use them subsequently ; and

WHEREAS, Tuberculosis, owing to its long duration, cripples the bread-earning capacity of the family, when it occurs among the poor, to such an extent that the want and hardships which follow in its wake prepare the healthy members of the family for the disease ; therefore, be it

Resolved, That we recommend to the Board of Health of the City of Philadelphia the registration and disinfection of houses which have been infected by tuberculosis.

Resolved, That we recommend to the City Councils of the City of Philadelphia the establishment of a municipal hospital for the treatment of persons suffering from tuberculosis.

In speaking on these resolutions, Dr. J. M. Da Costa said : When we speak of contagion in consumption, we cannot mean that it is markedly contagious. There is no proof that it is. It is, indeed, so slightly contagious that some of our best thinkers, with the largest fields of observation, notwithstanding the evidence that has been adduced, still hold that it is not contagious at all.

That it is moderately so, and that it can be communicated under exceptional circumstances, I firmly believe ; but that we should regard it as a very contagious disease, and take all the precautions that we do in such diseases, I deny. If it be contagious, it is contagious, as every one admits, chiefly through the sputum. Is it to be understood that an inspector from the Board of Health is to come daily to take care of the sputum-cup ? Is not the intelligent physician the proper health officer ? Is not what he says sufficient ? Finding bacilli in the bedclothes and on the bedstead, and destroying them, will not eradicate consumption. Tubercle-bacilli are widely diffused. They may, indeed, be said to exist everywhere ; and not only in the homes of consumptives. Where will you draw the line as to watching and interfering with the life of the consumptive ? Must we not take the broader view, and act on the degree of the communicability, and how far it is practicable to control it, rather than on the mere abstract question whether tuberculosis be contagious or not ? The degree, every observer knows, is extremely slight.

Observations made in regard to the direct relation of consumption to infected houses is, I believe, subject to several fallacies. I am one of those who believe that the disease is largely hereditary. Of what use is it to say how many living in these houses die of consumption unless you know the history as well as the number of those who have occupied them ?

Again, we should bear in mind, when discussing the contagiousness of phthisis, how enormously prevalent the disease is, and how difficult it is to draw conclusions when you have the most prevalent chronic disease to deal with. As bearing upon the question of infection from husband to wife, it has been calculated by Longstaff as a mere matter of statistics, without reference to the question of contagion, that for every thirty-three married men who died of consumption there would be one woman with it, and the probability would be a little more for phthisical wives. The number of cases seen in which both husband and wife have been affected is comparatively small. Flint, in over six hundred and seventy cases, noted but five such instances. The chances are

always slight that the husband communicates the disease to the wife, or *vice versa*. When we take all these facts into account, as well as the strong hereditary tendency of the malady, we must be careful how we draw conclusions in individual instances of apparent contagion.

I have many houses in mind in which no case of consumption followed the first. In one, the father died of a slow consumption twenty years ago. The mother is, as regards tubercle, perfectly healthy to this day. The seven children have grown up into exceptionally healthy young men and women. In another house the wife died of consumption about eighteen years ago. The husband continued to live in the same house, and a family of children have grown up healthy. Another house has been occupied for many years by a consumptive who has had the disease for twenty-five years. Neither his wife nor any one of the five children has become affected, though he is in the hands of a physician who does not believe in the contagiousness of the disease, and does not direct the sputum to be disinfected. Another house was occupied for years by a consumptive mother, whose husband had died of the disease many years before in another city. The son and daughter remained in the house mentioned for eight years in perfect health. It has since been occupied by a lady whose history I know, who is also healthy. The son got married about seven years ago, and has lived in various places. Within the last two years he has become a consumptive. His strong hereditary tendency determined it. I could go on citing instance after instance. I admit they furnish negative evidence. But negative evidence in a matter of this kind is valuable. I am, on the whole, quite certain that in by far the larger number of cases where I have known the history of both the house and of the household for a long time there could not be even any suspicion of house infection.

Further, in the question of house infection, we must not overlook the fact that these supposed centers of infection may adjoin and have common drainage. And, under any circumstances, does it not suggest that possibly there is something wrong in the drainage or subsoil, as much as it does infection of the house? The well-known observations of Bowditch and of others, have made us familiar with this mode by which consumption spreads in Massachusetts and in the whole of New England.

With reference to hospitals: Consumptive hospitals have been brought forward as a strong evidence of the non-contagiousness of phthisis, though I cannot say that the figures they adduce are to me absolutely convincing. But as regards general hospitals in which consumptives are, they certainly cannot be shown to be places of infection. I will quote the remarkable results in the General Hospital of Vienna. That hospital is one of the largest in the world. It is full of consumptives, and there were, as we know by some observations made long since, and before the dis-

infection of the sputum was attended to, in three years two thousand and seven hundred and thirty-six deaths from phthisis, and not a medical officer or a nurse had become infected. I will refer to the record of the Pennsylvania Hospital, which always has consumptives in its wards. I have taken some pains to ascertain the truth in this matter. In my long connection with the institution there has never been a time when there were not cases of tuberculosis in the medical wards, and there have also been cases of surgical tuberculosis in the surgical wards. Of one hundred and forty-seven resident physicians that have been in the hospital in the last seventy years, and of whom I have traced the medical history, and many of whom I have personally known and examined, but one has died of tubercular disease. Two others have at different times shown tubercular symptoms. One of these is now living in Arizona in fair health. In the other even bacilli have disappeared from the sputa. The one dying did not die for over five years after leaving the hospital. Moreover, before becoming a resident physician, he was in delicate health, so that it is not fair to attribute his death to his having been in the hospital.

A stronger statement still can be made with reference to the nurses. Of forty male nurses that have been in the hospital in the last twenty-five years, but one has shown any sign of tubercular disease. He is now a patient in the hospital. He did not become tubercular until four years after leaving. There have been one hundred and sixty-three female nurses whose histories can be fairly well traced. Of fifty-three that have left the hospital in the last five years, we know their present condition accurately. Not a single one of these certainly has had any tubercular symptoms, notwithstanding that there was always tuberculosis in the wards, always some exposure, and until recent years disinfection of the sputum was not practised, although ventilation was always attended to. There is only one case even doubtful. She has an occasional cough, and is not strong. Her father and mother both died of consumption.

When we take all these facts into account, granting, as I do, that up to a certain extent, tuberculosis is contagious, I think that the recommendation of the council to the Board of Health is the right one. Why fix the brand of leper on a poor unfortunate because he has consumption, when the medical officer can do all that is necessary? He can instruct how to ventilate and keep the house pure, and how to disinfect the sputa. What more could a Board of Health do? What can it do, except in instances of death where proper disinfection may not be carried out? Where death has occurred, and where disinfection is not likely to be practised, it would be proper for the Board of Health to interfere. Under other circumstances, why should we place a stigma on the consumptive? Why have him pursued from house to house? Why have him a

marked man? Why have the house a marked one? Why give it a bad name and injure the landlord, because there has been a death from consumption in it? I think that the resolution offered by the council covers the whole case. No human being will suffer. It will only enforce on medical men the necessity to insist on proper disinfection and proper hygiene. It will do as much as possibly can be done, and as much as any Board of Health can do.

With reference to hospitals for the consumptive, there is a great deal to be said on both sides of the question. Undoubtedly larger means of separating the sick from the well are desirable. But whether this can be made in any way obligatory is doubtful; large social questions and questions of finance arise which take the matter far beyond our power materially to influence.

We must not overlook the strong hereditary tendency to the disease. If you ever want to get rid of consumption, it is not going to be simply by the disinfection of sputa and similar means. It will be largely by the prevention of the marriage of tuberculous patients. There you strike at the root of the evil. Until hygiene, preventive medicine, and law have reached that point, I think that we must let this question take care of itself, doing the best we can to limit the ravages of the disease. I admit that it would be most desirable if we could separate the consumptive from the well. If the State were rich enough to make colonies in climates in which consumption will not flourish, that would be the most admirable means.

Let me say that it is not because I do not believe that phthisis is communicable that I oppose the contemplated action of the Board of Health to declare the disease contagious, and to register consumptives, but because I believe that the means proposed will produce hardship without corresponding value and that they are both unnecessary and insufficient. The Board of Health has already the right, and may well enforce it, to have any house that, whatever the cause, has a bad sanitary record, put in better order. Moreover, it can do much in destroying other sources of infection, such as from diseased meat, from the milk of tuberculous cows, in improving drainage, in favoring open spaces that air and sunlight may get into houses. But let it leave the care of the individual where it belongs—to the conscientious physician.

Dr. William Osler remarked that the question may be thus briefly stated:

First.—Following a primary law of parasitism, the bacillus tuberculosis frequents chiefly that organ in its host which communicates most freely with the exterior. Just as countless thousands of ova are thrown off from the intestine of the bearer of a tapeworm, so from tuberculous lungs in a state of softening and cavity-formation, countless millions of bacilli are cast out daily with the sputa.

Second.—The widespread diffusion of the parasite outside of the body has been demonstrated

in the infectiveness of the dust and of the scrapings of the walls of rooms and wards occupied by patients with pulmonary consumption. Moreover, the greater prevalence of tuberculosis in crowded communities, the enormous mortality from the disease in prisons and institutions, and its frequent occurrence as a house malady, suggest that the conditions favoring its continuance are those which foster the growth and spread of a specific contagion.

Third.—In the language of parasitology, the lungs constitute the chief seat of election. But, apart also from gross pulmonary lesions, the proportion of autopsies in which the bronchial glands are found tuberculous speaks unmistakably for direct infection in the exercise of their function as dust filters.

On these grounds, I believe that the registration of pulmonary tuberculosis would be beneficial—enforcing attention to those sanitary details so apt to be slighted or overlooked, and diminishing directly the danger of contagion in the community.

Infection through food is closely related also to the endemic prevalence of tuberculosis. The incidence of the disease in the mesenteric glands of infants indicates that the gastro-intestinal canal is a portal of infection only a little less wide than that of the respiratory system.

The question of tuberculosis is not, however, settled with the disinfection of the sputa of consumptive patients.

The hereditary transmission of the disease must be accepted, though an estimate of the frequency of this mode of infection must necessarily be uncertain, but for certain forms Baumgarten's theory of latency is particularly suggestive. Tuberculosis has been well called the *pébrine* of the human race. The analogy is striking, for not only, as you will remember, is the parasite of the silkworm-disease transmitted by direct contagion, but it also infects the eggs, which hatch, and may pass through various stages of development before they are finally destroyed.

Lastly, and here is consolation, the conditions which render individuals more or less immune scarcely yield in importance to those which maintain the vitality of the tubercle-bacilli in a community. So widespread is the seed that few of us escape infection, and the statistics of the Paris morgue show that in more than fifty per cent. of adults the germs not only gain an entrance, but actually effect a lodgement. As a factor in tuberculosis, the *soil*, then, has a value almost equal to that which relates to the *seed*, and in taking measures to limit the diffusion of the parasite, let us not forget the importance to the possible host of combating inherited weakness, of removing acquired debility, and of maintaining the nutrition at a standard of aggressive activity.

Dr. H. C. Wood: I came here not to speak, but to learn, and thus far have been quite successful. I wish to quote from a letter from Dr. Billings which has been placed in my hands. He

says: "I should like very much to hear the discussion, but probably should have little to say, since I am doubtful as to what the decision of the college should be on this point. I presume that there are about six thousand people in Philadelphia affected with consumption, and that a considerable proportion of these have contracted the disease in infected houses. If it were possible by a systematic notification for the Board of Health to locate a considerable number of these infected houses, what steps would it take to purify them? How would it deal with those of the poorer classes who are affected with this disease, and with their furniture, bedding, and rooms? Until these questions are answered, I do not find it possible to form a definite opinion as to whether it is worth while to put in force a compulsory system of notification."

This thought has occurred to me, and has not been touched upon by any of the speakers. In a case of diphtheria the Board of Health is notified. The patient dies or gets well, and the room is disinfected. Suppose, however, a case of consumption: the Board of Health is notified; the house is disinfected to-day but re-infection occurs to-morrow, and the end need not come for four or five years. Unless you add the power to forcibly remove the patient, and shut him up in a hospital-jail where you can confine and permanently disinfect him, I do not see how you are going to get any good results from the process of disinfection. As far as disinfection goes, unless you can prevent to-morrow's re-infection, I see little use in to-day's disinfection. If, however, the Board of Health could disinfect houses in which phthisis cases have died, something might be achieved, but the ordinary death notice is all the notification required for this.

Other prominent members of the College of Physicians participated in the discussion, dealing with the various sides of the question at issue in a broad and enlightened spirit. At the end of the debate, the college rejected the amended resolution offered by Dr. Flick, and voted the following resolution, offered by the council of the college:

Resolved, That the College of Physicians believes that the attempt to register consumptives and to treat them as the subjects of contagious disease would be adding hardship to the lives of these unfortunates, stamping them as the outcasts of society. In view of the chronic character of the malady, it could not lead to any measures of real value not otherwise attainable.

That strict attention on the part of physicians in charge of the individual cases, insisting on the disinfection of the sputum and of the rooms, on adequate ventilation, and on the separation of the sick from the well, as far as possible, will meet the requirements of the situation so far as they practically can be met, and better than any rules that, for diseases so chronic, can be carried out by a Board of Health.

That the College of Physicians respectfully requests that no official action be taken in the

matter by the Board of Health, except the insisting on the disinfection of rooms in which consumptives have lived and died, in instances in which such procedure is not likely to have been adopted under the direction of the attending physician.

On the other hand, our readers will remember that in November last Dr. H. M. Biggs, of the Bureau of Bacteriology and Disinfection, in an elaborate report to the Board of Health, made a number of recommendations having in view the more efficient limitation and prevention of pulmonary tuberculosis in this city. The Board, acting on the advice of the Sanitary Committee, has since adopted a series of measures designed to carry these recommendations into practical effect.

In the first place, it is proposed to place a placard upon the door of every apartment that has been occupied by a consumptive patient, stating the fact and that it has thus become infected. The remainder of the inscription reads as follows:

"It must not be occupied by other persons than those now residing here until an order of the Board of Health directing that it be cleansed and renovated has been complied with.

"Name of occupant—Floor—Street No.—

"This notice must not be removed until the order of the Board of Health has been complied with."

Secondly, a circular was prepared, for distribution among all physicians practising in the city, stating that the Board had resolved to adopt the following preliminary precautions:

(1) The Department will hereafter register the name, address, sex and age of every person suffering from tuberculosis, so far as such information can be obtained, and requests that hereafter all physicians forward such information on the postal cards ordinarily employed for reporting cases of contagious diseases. This information will be solely for the use of the Department, and in no case will visits be made to such persons by the inspectors of the Department, nor will the Department assume any sanitary surveillance of such patients unless the person resides in a tenement-house, boarding-house, or hotel, or unless the attending physician requests that an inspection of the premises be made. In no case where the person resides in a tenement-house, boarding-house, or hotel, will any action be taken if the physician requests that no visits be made by inspectors, and he is willing himself to deliver circulars of information or furnish such equivalent information as is required to prevent the extension of the disease to others.

(2) When the Department obtains knowledge of the existence of cases of pulmonary consumption in tenement houses, boarding houses, or hotels (unless the case has been reported and the attending physician requests that no visits be made), inspectors will visit the premises, will leave circulars of information, and will instruct the person suffering from consumption and the family as to the measures which should be taken

to guard against the spread of the disease. If it is considered necessary, the inspector will make such recommendations for the cleaning or renovation of the apartment as may be required to render it free from infectious matter.

(3) In all cases where it comes to the knowledge of the department that premises which have been occupied by a consumptive have been vacated by death or removal, an inspector will visit the premises and direct the removal of infected articles, such as carpets, rugs, bedding, etc., for disinfection, and will make such written recommendations to the Board as to the cleaning and renovation of the apartment as may be required. An order embodying these recommendations will then be issued to the owner of the premises, and compliance with this order will be enforced. No other person than those residing there at the time will be allowed to occupy such apartments until the order of the Board has been complied with. Infected articles will be removed by the Department, disinfected, and returned without charge to the owner.

(4) In the prevention and treatment of pulmonary tuberculosis it is of vital importance that a positive diagnosis should be made at the earliest possible moment, and that the value of bacterial examinations of the sputa for this purpose may be at the service of physicians in all cases not under treatment in hospitals, the Department is prepared to make such bacteriological examinations for diagnosis, if samples of the sputa, freshly discharged, are furnished in clean, wide-necked, stoppered bottles, accompanied by the name, age, sex and address of the patient, duration of the disease, and the name and address of the attending physician. Bottles for collecting such sputa, with blank forms to be filled in, can be obtained at any of the drug stores now used as stations for the distribution and collection of serum tubes for diphtheria cultures. After the sputum has been obtained, if the bottle with the accompanying slip filled out is left at any one of these stations, it will be collected by the Department, examined microscopically, and a report of the examination forwarded to the attending physician, free of charge.

(5) The authorities of all public institutions will be required to furnish to the Department the name and last address of any consumptive coming under observation within seven days of such time.

This circular concludes in the following words: "It is the earnest wish of the Board of Health that all practicing physicians in this city co-operate with the Board in an earnest and determined effort to restrict the ravages of the most prevalent and formidable disease with which we have to deal."

In the third place, a circular has been issued to the general public, more especially consumptives and their families, which treats of the nature of the disease, the special danger of infection from the sputa, and the measures necessary for protec-

tion, and includes a number of general sanitary directions. While endeavoring to impress upon the public the contagiousness and perils of the disease, it is hopeful in tone, and encourages those affected with it and all coming in contact with them, to unite in an active crusade against it. "Consumption," it states, "can often be cured if its nature is recognized early, and proper means are taken for its treatment. In a majority of cases it is not a fatal disease. A person suffering from consumption may often not only do his usual work without giving the disease to others, but may also get well, if the sputum is properly destroyed. The circular also urges that whenever a person without medical attendance is thought to be suffering from consumption, the name and address should be sent at once to the Health Department, in order that an investigation of the case may be made."

Referring to these regulations, the *Boston Medical and Surgical Journal* remarks: "A law may be good in the abstract, but it is practical only in so far as it secures the co-operation of the community which it affects, to such an extent as to permit its enforcement without excessive annoyance and expense; moreover, no law is good which causes more harm to society than it cures. The same may be said of the registration or notification of such a disease as tuberculosis, and of the adoption of general preventive measures against it. Nobody would advocate dealing with tuberculosis as with leprosy. Its chronicity is sometimes very great, and we all have before us numerous examples of those constantly and intimately exposed to its infectious principles with impunity. At what stage shall a suspected case of tuberculosis be reported?"

Widely different from this is the opinion of Dr. Henry B. Baker, as expressed in a recent address before the Michigan Medical Society. After dwelling upon the importance of "educational work among the common people," with regard to communicable diseases generally, he pleads as follows for a State hospital for consumptives:

"Isolation is a powerful factor for the restriction and prevention of all communicable diseases. A few centuries ago leprosy was common throughout all England. Isolation leper-hospitals were made to dot the map of that country from one end to the other, and leprosy disappeared. Leprosy is a more chronic disease than tuberculosis, yet isolation hospitals stamped it out of England. Isolation was a hardship to hundreds, but the disappearance of leprosy was a grand result to the thousands who have since enjoyed immunity. The same principle applies to tuberculosis. All sanitarians are agreed that among the most powerful means for the restriction and prevention of the communicable diseases are isolation hospitals. This is especially so because of the impossibility of preventing the spread of disease in the homes of the poor. The rich and intelligent can frequently prevent the spread of disease from their own spacious homes, but they cannot prevent dis-

ease from coming to those homes from the crowded homes of the poor, who serve them as laundry women, carriage-drivers, and in various ways, and who also spread disease to rich and poor, intelligent and ignorant alike, by scattering sputa in public halls and other public places. The State Board of Health has recommended a State hospital for consumptives, and will memorialize the Legislature for the establishment of such a hospital. Already there has been application for entrance to such a hospital. That consumptives would gladly fill such a hospital, there can be no reasonable doubt.

"There is now a large class of consumptives who are scattering the seeds of death broadcast over this State, infecting the food and air of dairy cattle which supply milk to children throughout the State, and of the animals whose flesh is used for food; infecting homes and public places, so that about three thousand persons contract tuberculosis in Michigan in every year; many of that class of consumptives are not likely to be successfully taught how to manage so as to avoid spreading the disease, except through such training as can be given them in a special institution carefully managed by an expert medical sanitarian. In such an institution many of them could be successfully taught; and, from being centres of widespread infection, they could be converted into comparatively safe citizens. Is there any State institution which does as much good as such a hospital for consumptives promises to do?"

"I dwell upon the utility of a State hospital for consumptives, not for its benefits to a class of unfortunate citizens worthy of sympathy and of all possible aid to recovery, but especially as a means toward the restriction of tuberculosis. In that restriction the State has an immense interest. Three thousand new cases each year, three thousand deaths, and more than six thousand persons constantly sick with consumption, in Michigan, implies, I think, a loss of more than three millions of dollars per year, and an amount of human suffering which, when we think of it as unnecessary, is truly appalling."

LIFE IN THE CELL.

BY JAS. A. CARMICHAEL, M.D., NEW YORK.

CELL VARIETY IN THE BODY.

OUR homunculus is born. He represents the pith of cell potentiality, and of what it is capable, up to the period of his advent upon life. In the light of the greater perfection of his organization, he has put all things antecedent under his feet, and stands next to his creator. From the tufts of the maternal placenta he owes, and has received the pabulum for his intra-uterine existence. But now, from one minutest portion of time to another, from hour to hour, from day to

day, from year to year, he is being builded and accreted—which must be, because the tendency of life is to death, and must be stayed. The tooth of time gnaws; "We are here to-day and gone to-morrow," and for every movement of his body, pulse of his heart, breath of his lungs; for every emotion, intellectual, moral and psychic, of his mind, waste and decay to be repaired and re-supplied is the ever-present urgency, in order to keep alive and burning the flame of life, that otherwise would flicker and go out. Life is but a transition state at best, and its extinguishment is the necessity of its being, which comes to all life, nor is it a respecter of persons nor conditions.

"Pallida mors aequo pulsat pede,
Pauperum tabernas, regum que turres."

Pale death knocks alike at the squalid hut of poverty and the gorgeous mansion of wealth. In presenting views of cell life and cell force in the numberless departments of the human organism, this, as before said, would be the study of a lifetime. So then, we must endeavor to occupy our limited space with as many as possible of the more prominent and important cell agencies of the body, and "exuno disce omnes"—from one, learn all. On looking over the field of cell life, even with casual and current observation, we hesitate as to the *where* from which to choose for purposes of illustration of the operations of this great vital force. There's such a world of wonderful things going on perpetually and steadily within us, and so many that we are irresistibly conscious we know nothing about, that, in our despair we are impelled to rush blindly and recklessly, like soldiers at a forlorn hope—the sooner it's over the better—and if we *must*, cry "peccavi," and be done with it.

In this frame of mind then, and like "the gaunt and lean," but undismayed Knight of La Mancha, let us try a tilt at the "windmill" of cerebral cell force. Better to storm the citadel at once; all the rest will follow. There's a tremendous question yet to be answered: *What are the relations of cause and effect existing between cortical brain-cells and mind manifestation?* If that isn't enough to take one's breath away, then we envy that man's pneumo-gastric, sympathetic, phrenic, and pulmonary powers, who can breathe calmly and unperturbedly when that question sounds upon his tympanum. That great philosopher of world-wide renown, and tireless explorer of the hidden things of nature, Tyndall, from the depths of whose capacious mind a solution was sought of the momentous question, "What is the causal connection, if any, between molecular motion in the brain and states of consciousness?" Does water think and feel when it runs into frost-ferns upon a window-pane? If not, why should molecular motion of the brain be yoked to this mysterious companion, consciousness?" His only answer was, "I do not know, and nobody knows." Just here it is both pertinent and pathetic, and painfully illustrative of the uncertainty of human life, and of the truth of the words we have written, but

a little while ago of the burning flame of life that must flicker and go out, to note the sad circumstances of the going out of this shining light, which, like a beacon from a height, was ever instant in spreading bright rays of scientific thought to penetrate the dark places wherein ignorance, or worse, pseudo-scientific pretension, ineffectually groped.

To know that the mind that was daily and hourly given to the penetrative exploration and discovery of the most profound and subtle elements and agencies of nature and her laws, and the operations of those laws, should be untimely extinguished and given over to decay by an accident of domestic carelessness and pitiable folly, is, indeed, to mark a commentary upon the futility of things human and mortal! We recall that most pungent and truthful response of this great scientist and philosopher to a distinguished prelate, Cardinal Cullen, as well as our memory serves, who undertook to dispute the truths of scientific revelations with Prof. Tyndall, holding that they were inconsistent with, and subversive of the teachings of Holy Writ, and that their tendency was to atheism and unbelief. The only reply vouchsafed by the latter was contained in these pregnant words: "His Grace, the Cardinal, is impotent in science."

At this point we are arrested, for a time, by the obtrusion of a few thoughts suggested by certain current events of the present day, which, however, as will be seen later on, have a direct relation with our subject-matter. The last emanation from a distinguished French writer has set the world agog, and Zola's " Lourdes " has brought contention, marked occasionally by the bitterness of polemic prelacy, overzealous journalism, religious enthusiasm, jealous support of one creed as opposed to another creed, antagonistic professional opinion, and such a grotesque and mosaic medley of statement and counterstatement, affirmation and denial that he who stands aloof and looks on may enjoy it all, and illustrate Victor Hugo's " L'homme qui rit. "

When Cardinal Cullen opposed the teachings of the sacred volume to the stern and rugged facts of science, the mystical superstition generated at Lourdes was only one of the innumerable instruments and agencies of his church, and when maintained and supported by Papal infallibility and sacerdotal authority, there is no wonder that it keeps a firm grip upon coercive religious faith and observance to the present hour. Scientific interpretation and explanation of the so-called miraculous cures effected in the otherwise obscure village of the " Hautes Pyrenees " holds no place in ecclesiastical lore. The church regnant must ever be the church regnant. Catholic must ever be καθ-ολος, an undivided whole, and capable of no division, with blind faith as its corner stone. But, for all this, and in spite of dogmas, creeds, superstitions, and all the oppressive obligations imposed by church domination and decree, science yet reigns supreme, and her revelations are

the only sure and infallible interpretations of the operations of creative law. The progress of human civilization and human knowledge receives a staggering blow when the superstitions and religious mysteries of the dark and benighted ages still confessedly obtain, and are made to serve as a prop of support to the weak and wavering, reaching out helplessly and piteously for some guide for their uncertain steps on the onward journey that leads to the unknown.

When, in this nineteenth century, the shadowy visitation of the " Blessed Virgin " is humbly and prayerfully invoked by the pious pilgrim at the shrine at Lourdes, wherein does such faith differ from the " Upadana, " as old as Buddha himself—the Oriental name given for the intense desire for life, so intense as to beget will force, which is only another name for the re-animation of nerve force and of cell force, the powers of both of which have been prostrated and held in abeyance by disease and despair? The experiences emanating from Lourdes are held up as signs of a heavenly interposition for the relief of suffering humanity; so are the so-called faith cures; both of which doubtless help many a poor, credulous, suffering body. But science holds up the " Upadana, " stimulated, if you like, by religious faith, or, it may be, by the mysteries of superstition, but all productive and promotive of the force or forces that beget the form and substance of matter, and physical restitution; and disease departs, vanquished by renewed nerve and cell force, and followed by the return of life and health and happiness. Come from what source it may, happiness is the best gift to man, and the most potent promoter of morality. Minds beclouded by apprehension and gloom tend more to the practice of vice than of virtue, and where love is there is, more nearly, the approach to a divinity in religion. No system of philosophic thought can be productive of good that foretells a future of nothingness, and that teaches hopelessness and despair. In the words of a modern thinker, " God will forgive us all but our despair. " From the consideration of such influences as these, acting upon man and involving his mental, moral and physical well-being, the gradation is easy to the investigation of the structure of the cells of his brain, and the relations of cause and effect existing between cortical brain cells and mind manifestations. In order to gain a footing, or, in the apt expression, a *point d'appui*, from which to reason at all upon the question proposed, we must crave the indulgence of the reader, while we recapitulate, what he doubtless well knows, the anatomical constitution of the cortex of the brain; and in doing so, employ as few words as possible.

—In the official census reports of the Register-General's office of England, the medical profession, which in legal language means only medical practitioners on the register, is made to include dentists, dental apparatus makers, medical students, assistants, midwives, nurses, and invalid attendants, " as well as sundry other persons more or less directly connected with medicine. "

A PLEA FOR THE CLOSER STUDY OF SUBJECTIVE SYMPTOMS IN THE TREATMENT OF INSANITY.

BY HENRY R. STILES, A.M., M.D.

THE strongest point in the Homœopathic treatment of the insane is its recognition of *subjective* symptoms. The present trend of medical study and of bedside observation of disease inclines strongly to favor objective symptoms, to the very serious neglect of those of a subjective nature, particularly in those cases where the nervous and mental systems are involved. I think I am justified in saying that this is especially true of physicians of the dominant school. Perfectly *au fait* in the varied pathological phenomena of the cerebro-spinal system, as well as in the recently greatly increased knowledge of nerve energy and force which we owe to the laboratory psychologist, they still largely ignore the "side-lights" which might be derived in many cases from the patient's own statement of his condition. Secure in the possession of what they consider (and to some extent rightly) "bottom facts," they decline to be bothered with the "vain imaginings" of a "hysterical" woman, or a "cranky" man. They have "no time to spare to listen to such nonsense." Holding as I do, however, to an old-fashioned belief that it is one of a physician's highest duties to be patient and to take full time to fill out every point of diagnosis needful to the formation of a true opinion, I believe that, cranky, hysterically disposed, and warped as are many of the individual mentalities with which we have to deal, we cannot afford to overlook these mental subjectivities, which so often give us the real "clue" for which we are looking.

The Homœopathic system of therapeutics, from its earliest inception, has given due prominence to the subjective symptoms, both as related to physical and to mental disease. Recognizing (though, perhaps, to some extent, unconsciously) the threefold constitution of man, viz., body, soul and spirit, the framers of the Homœopathic repertories have carefully noted and conserved the *mental* symptoms of persons while under the action of various remedies. And it is this feature of therapeutical study which has given a precision to the selection and administration of remedies in that school, which has elicited the most brilliant curative results, not only in physical but in mental disorders.

These subjective symptoms of disease, which can only be felt by the patient himself, are the unvarying expressions, or indices, of certain conditions, irritations, modifications or changes taking place in the living tissues; and are inscrutable to any outside observation, except as they are revealed by the conduct, or find expression through the speech of the patient. Pain, for example, is a subjective symptom, the full character, location, intensity or peculiarity of which we cannot measure when it occurs in another person; we can only judge of it as we see it revealed

in that person's anguish of countenance, movements of body or limbs, and vocal expression by means of cries, moans and speech, aided, to some extent, perhaps, by recollections of similar suffering in our own personal experience. But, as similar physical or mental causes will produce similar sensations and manifestations of pain in different individuals, we gradually and involuntarily acquire a vocabulary, so to speak, by which we are able to express to others the location, nature, degree and peculiarities of these inward sufferings, be they physical or mental.

These subjective symptoms, or sensations, which are wholly within and can only find full expression from the patient himself, are *complementary to (and no less valuable than)* the objective symptoms which are patent to the eye, the ear, the touch and the general apprehension of the physician or of the outside observer. Both together they make up the complete picture of the disorder or trouble from which the person is suffering; and both together must they be studied. This is what practically occurs in what is known as "taking the case," or examining a patient. We first note all those external phenomena of disturbance of which we can obtain information by the practiced use of our own senses, as guided by our previous experience with disease. But there are other, and frequently more precise sources of information which are closed to the observation of our senses, and for them we must inquire of the patient himself, and from the objective symptoms which we have gleaned for ourselves, and the subjectives to which he alone can help us, we form our mental picture of the case. But if, as sometimes happens, he be of a dullish nature, unaccustomed to convert impressions into words (and every physician will recognize the fact that there is a wide range of difference among persons in this respect); or, if he be so overwhelmed by his malady as to be unable to give expression to his feelings, we are then thrown back almost wholly upon the objective symptoms; our picture is, to a large degree, incomplete; we must get along as best we can. If, however, our patient has a fair and equable power of describing his own inward impressions of his disease, we often derive from it a great degree of assistance in our diagnosis. But, if he happens to be of an irrepressible (not to say imaginative) temperament, keenly alive to, and easily thrown off his balance by suffering; if, moreover, he possesses a more than usual facility of language, then his sufferings are apt to be very vividly expressed and described, with a degree of exaggeration against which we must be on our guard.

This latter phase of the matter is one with which physicians very frequently come in contact; and it is so repugnant to the methodical and practical attitude which the physician has to maintain in his dealings with the sick, so opposed, also, to the materialistic basis on which his consideration of the objective signs of disease are conducted, that the tendency, after a few experiences of

this sort, is to distrust, and gradually to ignore, the value of subjective symptoms altogether. Of course, the degree of distrust depends considerably upon the entire "make-up" of the physician himself; one man may be able to apprehend, more sensitively than another, the spiritual and mental factors entering into a given case. But, as a rule, the physician feels obliged to give fuller credence to the hard facts which his own senses and experience have proven to be reliable, than to the vividly expressed "feelings" of his patient. Hence (especially where a physician has a large practice pressing upon his time and attention), subjective symptoms are liable to have "the go-by," to be hastily classed as "nonsense," "bosh!" "hysteric," etc., etc.; and the Homœopathic repertoires have suffered no slight degree of opprobrium and ridicule because they carefully preserve so many of these "purely subjective" features of disease. It is very natural, indeed, that in listening to some of the strange sensations described by patients, we should say to ourselves (what prudence forbids our saying to the patient); "Oh! there never was such a thing; you are the only one who ever thought it." But when, in a larger experience, you see that other patients, similarly afflicted, have the same fantastic (as they appear to you) sensations, it becomes apparent that there is more in such things than our philosophy has ever dreamed of.

In the light of the practice and experience of the Homœopathic principle (that a medicine of which the toxicological proving produces a certain aggregation of clinical phenomena, will best meet or cover a similar aggregation of phenomena in the diseased body), it is evident that we can no more ignore mental symptoms or sensations than we can those of a purely physical character.

In dealing with insanity, we have to deal with subjective symptoms of deranged nervous and intellectual action, and consequently of sensation, which are quite as peculiar as those of the deranged physical body. And, whether these subjectivities are primary, or of reflex and sympathetic character, they are equally manifested by absurdities and observations of thought and expression. *Illusions*, or "false perceptions of a real sensorial impression;" *hallucinations*, or "false perception, centric in its origin, and without any sensorial basis;" and *delusions*, in which the intellect is more directly concerned, and which are consequent upon illusions and hallucinations, all present aberrations of thought and expression so opposed to the normal healthy lines of human thought and expression and observation, that we are naturally averse to admitting that they may possess any value whatever as *indices* to the physical or mental causes of the patient's malady. Yet we must remember the axiom that the insane man either reasons incorrectly from sound premises, or else he reasons correctly from unsound premises; and if we can, by a process of patient induction, "get back," so to speak,

upon *his* line of thought (warped and tangled though it be) we may have the good fortune to strike the "clue" to the subjective phenomena which have so puzzled us. If, also, we recognize the fact that in mental, as in physical disease, there are certain lines of disturbed active and of consequent deranged sensations; that among all the insane there is a wonderful *similarity* of illusions, hallucinations, delusions, and some aberrations which are peculiar to each sex, it will become gradually more manifest to us that there is indeed a logical thread of connection between the mental and physical phenomena of each individual case, which, if it could only be gotten hold of, would marvellously help us in its treatment.

Unfortunately, however, the workings of the mind, whether healthy or diseased, are so completely veiled, that they can only be made known to us by the will of the individual. And where one intellectual function becomes disturbed, generally all are, or soon become so; and the will becomes enshrouded and lost in the confusion which ensues. So that, in the case of mental disease, we have to trust chiefly to a few and scattered fragments of information which the wreck of nature from time to time casts upon the shore-line of our observation. Still, the subjective symptoms which we are thus able to gather from the "flotsam and jetsam" of this storm-tossed mind—though warped, incoherent and ill-fitting, are, if *rightly handled*, not to be despised.

And, we hope to see the day, when in mental, as well as in other forms of disease, the physician will base his treatment of insanity, not upon the "classifications" accorded it by the schools, but upon a course of close observation and inductive reasoning, directed towards the "individuality" of the case in hand; a search in which "subjective symptoms" will be allowed to demonstrate their full value, and be no longer snubbed off-hand. Every case of disease differs from every other case, even of the same disease, which ever has been or ever will be, in that it contains within itself, *plus* the phenomena common to all cases of the same disease, the *ego*, the *personality* of the individual patient; and that personality is as manifest in the derangements consequent upon either mental or bodily disease as it is in the features, form and character. Whoso—apprehending this fact at its true value—listens carefully to the testimony of the subjective symptoms, as well as to the objective, and by their aid searches for the "individuality" of the case, will have pleasanter dealings, even with the mind diseased, than he who trusts entirely to his pathological knowledge of nerve and brain function.

— "Doctor," said the patient, "I believe there's something wrong with my stomach." "Not a bit of it," replied the doctor, promptly. "God made your stomach, and He knows how to make them. There's something wrong with the stuff you put in it, maybe, and something wrong in the way you stuff it in, but your stomach is all right." And immediately the patient discharged him.

CLINIQUE.

FECAL FISTULA FOLLOWING ABDOMINAL SECTION.*

BY A. MORGAN CARTLEDGE, M.D.,
LOUISVILLE, KY.

SPONTANEOUS recovery is the rule in such fistulae, probably eighty per cent. having such a fortunate termination. It is the obstinate and troublesome twenty per cent. that we are especially interested in.

Improved technique, combined with greater experience and better facilities for observation within the abdomen afforded by the Trendelenberg position, will certainly do much to diminish the occurrence of fecal fistula. It has been claimed that this condition is a preventable one. No doubt this is true of most cases, but surgeons of wide experience can easily recall intra-abdominal and pelvic troubles where no amount of skill and care could protect against at least the possibility of this sequel of operation. It may be said that cases so desperate from adhesions as to render fecal fistula probable should not be operated upon, and yet these very desperate cases often make the most gratifying recoveries, without fistula or after its occurrence.

Prevention.—When numerous intestinal adhesions are found to exist, no time should be lost in extending the parietal cut to such dimensions as to permit of the visual inspection of the field of work. The value of Trendelenberg's posture in such cases cannot be over estimated. Too rapid work is very dangerous in these cases, it matters not how dextrous the operator. Not only may fecal fistula result from intestinal denudations of the serous coat, but the researches of Cornil, and later of Macaigne, demonstrate conclusively that such denudations may be the means of permitting the colon bacillus to penetrate the intestine from within, and thus excite grave peritoneal inflammation.

Drainage, aside from its beneficial effect when needed to prevent peritonitis in removing culture media, certainly predisposes to fecal fistula. The pressure effects of the glass tube, when retained for a number of days, especially when not moved or turned in its bed, may be productive of great mischief to the intestinal wall, the danger consisting chiefly in peritoneal denudation when it is withdrawn. What has been said of the glass tube applies with increased force to the gauze as suggested by Mikuliz. I would not be understood as condemning this most valuable method of drainage in indicated cases, yet four of my cases of fecal fistula have followed its use.

I believed, and still believe, it best met the indications of drainage in these four desperate cases,

and yet, taken with unavoidable peritoneal denudations, I think it was a factor in the production of the subsequent fistula. Had I resorted to other means of drainage, death might have claimed some of these luckless victims.

From what has been said in connection with infection from within the bowel by the colon bacillus, preventative measures would not be complete did they not include thorough evacuations of the bowels prior to operation.

Medical Means of Treatment.—With the knowledge that the majority of abdominal fecal fistula recover spontaneously, we should not resort to surgical treatment until thorough trial has been made of the usual medical means of treatment. As soon as it is manifest that we have to deal with this trouble, four measures should be immediately instituted. First, give proper exit to the discharge by enlarging the skin wound if necessary; second, thorough evacuation of the bowels by cathartics; third, free irrigation and drainage of the fistulous tract; fourth, rest to the alimentary tube by a diet barely sufficient to maintain life. After the bowels have moved thoroughly, they should not be again disturbed for at least one week and then by an enema. Thus treated, the majority of fecal fistula ultimately recover—many closing in from six to fifteen days; in fact, scarcely retarding the convalescence after operation.

Surgical Treatment.—Surgical literature contains little in regard to the radical treatment of fecal fistula after laparotomy. This is due to the fact that few surgeons have attempted the operation. In deciding upon operation it is important to remember that the condition usually differs very widely from fecal fistula as evidenced in the ordinary colotomies, enterotomies and fecal fistula following abscess. Here the opening in the bowel is approximated to the parietal peritoneum, and little difficulty is encountered in their closure by operation. The tract in most cases of fecal fistula following abdominal section is quite long—three to ten inches—and not infrequently very tortuous. If operation is decided upon, the surgical indications are to expose the fistulous tract, follow it and dissect out the adhesions to its bowel origin, cut it off and suture the bowel. In some cases this procedure will not be attended by many difficulties; in others it becomes probably the most trying of all intra-peritoneal operations. Considering that the largest number of these cases recover without operation and the difficulties of the operation, it seems a safe and judicious rule to defer operation for at least a year, in the hope that nature, assisted by competent medical means, may afford relief.

The author reported a successful operation for fecal fistula following laparotomy, performed one year before. The fistulous tract—seven or eight inches long—was dissected out, and the diseased bowel (loop of small intestine deep in right pelvic fossa) refreshed and sutured. The patient made a very rapid recovery.

* Read before meeting Louisville Surgical Society, March, 1894. (An abstract reported for this journal by C. C. Mapes, stenographer.)

DISCUSSION.

Dr. W. O. Roberts: The essayist has gone over the ground so thoroughly that there is nothing left to be said, except to give one's experience. It has been my good luck to meet with only one case of fecal fistula following laparotomy. This was in a woman who had a large ovarian tumor with adhesions, but no rent was discovered in the bowel at the time of the operation, and the fecal fistula which developed on the sixth day after operation was attributed to the long continuance of the drainage tube. The opening, I thought, was in the rectum. Recovery took place without any operative interference.

Dr. J. G. Cecil: My experience with fecal fistula is very limited; in fact, have only seen one case, and that occurred in the practice of another surgeon, falling into my hands later; it was following an operation for fibroid. This was a case of a woman who was under my observation for several months, and despite all treatment that was adopted or could be suggested, the fecal fistula persisted for quite a length of time, probably three or four months. It, however, became very nearly closed, and I presume, finally closed altogether. She was a dispensary patient, and from the fact that I heard nothing more of her, I assume that the fistulous tract closed. This case bears out the statement made by the essayist, and also by the previous speaker, that certainly many of these cases will close spontaneously, even those that appear to be most obstinate. Therefore, I believe that we should persevere in the treatment, following the methods outlined by the essayist, only resorting to operative interference when it becomes evident that the fistula will not close otherwise. I agree with him heartily that a man should congratulate himself in many cases of pelvic disease in getting off with a life saved and nothing worse than a fecal fistula remaining, because certainly when we open the abdomen in bad cases of pyosalpinx where we find everything matted together, the intestines included, it becomes almost an impossibility to avoid tearing into the bowel in separating adhesions. The region is almost inaccessible, and to dissect out an abscess in that situation successfully, with only a small fistula remaining, is certainly deserving of congratulation. I also agree that there are certain cases which will invariably be followed by fistulae, despite every possible care in the hands of the most expert operators.

Dr. W. C. Dugan: I have had very little experience in this line of work, the only cases I have seen having been those following hernia, and there is only one to which I wish to call attention. I fully agree with everything Dr. Cartledge has said in his paper, in regard to waiting one year in cases of fecal fistula following laparotomy, with the exception of where the opening is high up in the small gut, when the operation should be performed as soon as possible. The fecal opening is sometimes high up in the ileum, as will be shown by the food being discharged in a liquid state and

only partially digested, and in such cases operation is demanded as soon as his condition will admit; it may be necessary to resort to rectal feeding to accomplish this. I recall one case where an operation had been performed for hernia—a long standing, neglected case—in which fecal fistula developed on the sixth day after operation, and it was found that the fluid passed out half digested. She lost flesh rapidly, going down as though she was eating nothing, while, in fact, she ate as though half starved to death. It was simply one of those emergency cases, and it was decided that an effort should be made to close the fistula. A careful dissection was made, and the edges brought together and stitched with the Czerny-Lembert suture, but her condition was such as to not give much hope of recovery, and she died the fourth day, never reacting from the operation. So while the rule should be observed, the exception should not be lost sight of, for it is equally important.

Dr. Jas. S. Chenoweth: As to the causation of fecal fistula following abdominal section: I believe in a large percentage of cases it is due to the use of drainage. In a great many of these cases the gauze is left packed in the cavity entirely too long. Twenty-four hours, I take it, is sufficiently long for adhesions to form around it, so that drainage may be kept up, and the gauze ought always to be removed within twenty-four hours. In all cases where iodoform gauze is used for drainage purposes, the lips of the wound become adherent to the gauze, and the gauze becomes so filled with serum that drainage practically ceases before the end of twenty-four hours, and there is also the disadvantage that it is always more difficult to remove it after that time. In case hemorrhage is feared from early removal of the gauze, I think thirty-six hours would give ample time for any vessels to be clogged sufficiently to allow removal. It certainly does not drain after that time and should be removed, owing to its tendency to adhere to the bowel and cause fistula.

Dr. E. R. Palmer: Have you ever had gauze drainage tubes, so-called, examined microscopically where they had been left inserted for thirty-six hours, to see whether or not any micro-organisms could be found in the meshes of the gauze?

Dr. Jas. S. Chenoweth: No. I have seen reports to the effect that gauze could be left inserted for a week or even longer, but have never seen a case that would drain that long. The longest time I have ever left my gauze was forty-six hours, and it had then become adherent to everything with which it came in contact.

Dr. E. R. Palmer: I think you ought to get a good sized vessel closed in twelve hours. I have recently had a curious experience in surgical hemorrhage after an operation on the urethra for stricture. The hemorrhage continued, despite all efforts to arrest it, for a period of six days, until, finally, after various modes of treatment had failed, I introduced a bougie, which was allowed to remain for twelve hours, then withdrawn, and

there has been no hemorrhage since. I believe the result due to that period of rest—twelve hours—which allowed sufficient time for the blood to become coagulated in the vessels.

Dr. Jas. S. Chenoweth: Recently after an operation for pyosalpinx, an attempt was made to remove the gauze at the end of twenty-four hours, and it excited a little fresh hemorrhage, consequently was allowed to remain thirty-six hours, when it was removed and no further hemorrhage resulted.

Dr. W. O. Roberts: In this connection: I had a case in which there was considerable hemorrhage following removal of a large ovarian tumor with tremendous adhesions. The woman was so nearly in a dying condition that I did not take time to ligate the vessels, but packed the cavity with iodoform gauze, which was not removed for forty-eight hours. In fact, the patient had so little pulse that I was rather afraid to attempt it. At the end of that time I removed the gauze, and the force necessary to do so was sufficient to almost lift the woman's weight. There was no fresh hemorrhage, but, as Dr. Chenoweth says, there was some dark-looking fluid behind the gauze which came away after the removal of the gauze. I think thirty-six hours is long enough to allow the gauze to remain.

Dr. A. M. Vance: I simply want to mention the advantage of the Trendelenburg position in searching for injuries done at the time of the operation. I think in the old flat position we are at a very great disadvantage, and oftentimes intestinal injuries escape our notice, where the Trendelenburg posture would allow us to discover them. When an injury to the gut is detected, I agree with Dr. Cartledge that the proper procedure is to enlarge the incision and repair the injury.

Dr. A. M. Cartledge: I accept the suggestion made by Dr. Dugan and will incorporate it in my paper, as I believe it to be an excellent one: that where we have a fecal fistula opening so high up in the bowel as to interfere with assimilation and digestion, an operation is demanded earlier. As a rule, however, in the class of cases referred to in my paper, fecal fistula following laparotomy, the intestinal opening is nearly always in the lower bowel. Of course, it is different in fistula following hernia, and the opening in such cases may often be found higher up. Dr. Chenoweth is quite right in reference to one point I made in the paper—drainage is unquestionably a factor in the production of fecal fistula; not that I think we can dispense with drainage, for we must consider it and duly appreciate its importance, and especially in removing gauze drains early, and in turning drainage tubes, etc., in order to prevent, not so much the condition generally spoken of in this connection—injury to the intestine from continued pressure—but to prevent adhesions to the drainage tube, so that when it is removed the peritoneal coat of the bowel is broken, allowing the escape of the colon bacillus and making a nidus

for its growth and multiplication, after which we have necrosis from infection from within. That this does occur is proven in a clinical way by the fact that fecal fistulae and necrosis sometimes occur after laparotomy, where no injury has been done the bowel. The question of adhesion to the gauze used for drainage is one of daily occurrence, not only in abdominal work, but everywhere else. I have had cases of laparotomy in which when we attempted to pull out the gauze at the end of twenty-four hours we brought out a large quantity of the omentum which had fairly grown into the gauze.

DIABETES—DEATH IN DIABETIC COMA.

By J. B. MARVIN, M.D., LOUISVILLE, KY.

NO. 1.—I saw a case recently which illustrates a point I emphasized several years ago at a meeting of this society—*i. e.*, how often diabetes was overlooked, especially in young people—people who go about for quite a while complaining slightly of gastric or other symptoms, and then dying rather suddenly in coma. A young man came to me early in the year, a healthy, buxom-looking fellow apparently, with the statement that he had applied for increased insurance and the doctor had told him that he had sugar in his urine. An examination revealed the fact that the urine was loaded with sugar, and yet there were absolutely no symptoms. I kept him under observation, regulated his diet, giving him phosphoric acid, etc. He left here during the summer, and I afterward heard from him that he was worse. He came back here during the fall, and three weeks ago I was summoned one day and found him in bed, and he said there was a "hard spot" on his leg, which was found to be located over the gastrocnemius muscle. I told him that I thought he was going to have a phlegmon there, to keep quiet in bed and make some soothing applications. Three or four days afterward it was found to be a suppurating mass, and I called Dr. Rodman to see the case. It was questionable in my mind whether an operation would be justifiable, but we decided finally to have the patient removed to the St. Joseph Infirmary and evacuate the phlegmon. We felt that there would be nothing in the operation which would hasten the end, as it was a very simple matter. Only a very small quantity of chloroform was administered, which was taken nicely, and Dr. Rodman emptied the phlegmon. The patient rallied, but the breathing seemed to be a little peculiar. That night Dr. Rodman came for me and we went together to visit the patient. The peculiarity about the respiration had not improved, and it was a question whether it was nervous breathing or whether it was the beginning of the end. It proved to be the latter. The patient slept well that night under morphine, and the next day, thirty hours after the operation, he died in diabetic coma. That is the usual

outcome in cases of this character in my experience, where the patient is under fifty years of age. I make this age the dividing line, the prognosis being much more favorable in patients over forty-five or fifty than under this age.

TETANUS.

No. 2.—Another recent case has interested me not a little. A man who was strong and healthy, on Sunday afternoon in walking out to his coal-house, where some repairs were being made, having on at the time an old pair of shoes, the soles of which were partially worn through, stepped on a nail, which was forced into his foot. On the eighth day I was summoned by his physician, Dr. Woody, and the patient said that he felt very "stiff about the mouth." The pulse was of good volume, and there was no hyperæsthesia of the surface; intelligence perfectly clear, as it always is in these cases; simply this curious sensation about the mouth. He had been shot during the war in the right cheek, and had been taking one-third grain extract nux vomica at a dose several times per day. The question came up, of course, whether it was going to prove to be a case of tetanus, as we feared, or whether these rather full doses of nux vomica played any part in the trouble. The nux vomica was stopped immediately; he was put upon chloral and bromide and responded well to it. There was no increase in the symptoms until the sixth day, when the medicine was re-gurgitated, the pulse became quicker, and the following evening he died. There was almost complete paralysis of the respiratory centers. It is the only case of tetanus that I ever saw which had no convulsive movements save locking of the jaws. The jaws were firmly locked, and at times we could not get them apart; the last twelve hours we had to keep a stick in the mouth. There was no hyperæsthesia of the surfaces; no opisthotonos, but there was a little stiffness postnuchal a few hours before death. The whole poison seemed to spend itself in just those centers—the spinal accessory and respiratory centers.

ACUTE RHEUMATISM—PHYTOLACCA DEOANDRA.

METROPOLITAN HOSPITAL.—SERVICE OF DR.
ALFRED K. HILLS.

Reported by Drs. Edgar A. Grafton, and F. Walter Brierly.

KATE B., aged 30, a widow employed as a domestic, working in a damp, dark cellar, was admitted to hospital on June 4, 1894, complaining of pain in ankles, knees, wrists, elbows and shoulders.

No history of her family can be obtained, but patient herself had always enjoyed good health until February last, when she had an attack similar to the present, but less severe, with which she was laid up for two weeks.

Patient has two children living and healthy, and has had one miscarriage. No history of syphilitic taint can be obtained. Patient had been in one of the city hospitals for six weeks with "sore eyes." She also complained somewhat of pains in the wrist joints. Patient left that hospital, but on the day following pains became very severe and many joints became affected.

The pains in affected joints are drawing and tearing in character; worse on motion and during the night. Examination shows that the joints themselves are but slightly affected, but rather the sheaths of the tendons and fascia surrounding them. Over the dorsum of right foot are signs of inflammation, while in the right popliteal space a diffuse swelling is noticed, whether of glandular or fascial origin cannot be said. Along the tibial periosteal thickenings can be felt. These, with the popliteal enlargement, are very tender to the touch. The other joints affected show less active changes. There is some indefinite enlargement of the posterior cervical glands. Posterior synechia in left eye. Heart shows no signs of disease. Temperature on admission was 102°.

Rhus tox and phytolacca were the two remedies suggested by the condition, the periosteal thickenings and enlargement of the cervical glands turning the balance in favor of phytolacca. This was administered, fifteen drops of tincture (gtt xv) being placed in two ounces of water and given during the twenty-four hours. On the second day after administration of this remedy, temperature reached normal; the evening temperature however, of the second and third day rose to about 100°. Since that time, however, it has remained normal during the twenty-four hours.

The subjective and objective symptoms rapidly subsided with the temperature, and on the seventh day patient was sitting up, with only slight stiffness in the affected parts.

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—The Midway mania is a new nervous disease which is directly traceable to the exhaustion and excitement incident to visiting the Midway during the World's Fair. A number of cases have been reported by medical men from all parts of the country.

CORRESPONDENCE.

BITICISM OF DR. CARMICHAEL'S ELOQUENT ARTICLES: WITH REJOINDER.

DR. JAMES A. CARMICHAEL.

Dear Sir: There is one quite noticeable point in your eloquent articles on "Life in the Cell," respecting which I am impelled to crave further enlightenment, as it seems to me that the value of your investigations must largely depend upon a correct decision of the question involved. I refer to your repeated and emphatic assertion that the revelations of science as to the descent of man are "humiliating." "We began life," you say, "a mere viscid blob of glutinous matter; we end it rank, pestilent stuff, only fit to gorge worms; to this complexion must we come at last. If we seek to cram our intellectual maw with the profound subtleties of Schopenhauer and of Spencer, of Haeckel and of Conte, we are confronted with the humiliating bathos of the interpretation of human life by the old peripatetic [?] philosopher Plato, who, though we have no record to show that he knew or had conceived anything about these wonderful things of cell force and cell growth, yet, viewing man's early beginning in the light shed by modern science upon these mysteries of life, he was not very far out of it when he said: 'Man's a two-legged animal, without feathers.' Then let man be humble and honest in contemplating the source of his being." And again, in your latest disquisition: "It's humiliating to think that we owe life to a thing with a flattened head, and a long, tapering, filamentous tail." How does this agree with your satirical delineation elsewhere of the man you have heard say: "'that it was a degrading thought to think that man's evolution was from an ape,' and who only feels the affront to his *amour propre* that would give him any place lower than the angels?" Allow me to ask if there is any essential difference between a view that "degrades" and a view that "humiliates;" and if it is any more absurd to reject the ape than to turn up our nose at the animalcule, if each is proved to be an ancestor? Or is your outcry against the latter a mere piece of irony also? But then you seem quite serious in admonishing us that "we must abide by the decree, so let us make the best of it, and try to find out what it all means, if we can!" Next follows a most astonishing quotation:

"What is writ, is writ,
Would it were worthier."

If this intended to apply to the work of that "Omnipotent Maker of Law," of whom you had previously said that "He gathers all things together, and holds them in the hollow of His hand?" The old Spanish King, Alfonso the Wise, had good excuse for expressing such an opinion at an epoch when the Ptolemaic scheme of Creation was still in vogue. But what can *yours* be?

GEO. L. FREEMAN.

DR. GEORGE L. FREEMAN:

Dear Sir:—It is really painful to witness the throes of mental anguish with which the reading of my articles seems to afflict you, dear critic, and I am constrained to appease your craving for further enlightenment and to "minister to your mind diseased" by a little of the soothing, comforting and supporting "mandragora" of explanation. First of all, an interrogation point after the word "peripatetic," seems to indicate the necessity for informing you as to its etymology. Its derivation is from two Greek words, *περι*, around, and *πατεω*, to walk, and its application was to the peripatetics or disciples or followers of Aristotle, who walked about while teaching in the "Lyceum at Athens." Hence the use of the term generically, as applied to the philosophers of old.

As respects the use of the two words, "degrading" and "humiliating," which seem to be another source of per-

turbation to your restless spirit, the first expressed the unwillingness of the anti-Darwinist to accept the degrading Simian progenitorship, and the second simply defined a natural repugnance to spermatozoid life-origin. Of the quotation "What is writ, is writ," etc., and which caused "a most astonishing" paroxysm in the mind and conscience of my poor, unhappy critic, I had flattered myself that it was rather peculiarly appropriate, as expressing painfully the sense of humiliation at the said life-origin. But I have another still deeper sense of humiliation; that I am compelled to instruct and explain all this to my would-be critic. However, as that is only going back to the exercise of my former function as teacher, it comes easy.

But, my dear sir, you seem to be greatly troubled with the affliction defined as the "cacœthes scribendi." Get your lexicon, dear critic; or, shall I interpret, and call it the bad habit of scribbling? When my eye first fell upon the name "Alfonso," the thought flashed with lightning speed: What! has my dignified and honorable critic been suddenly smitten by the "Young god," and is he the victim of "Eros" and now in the fervent "ecstasy of love" that he recalls "Alonzo the Brave and the fair Imogen?" But, no; there's no such sweet and tender fooling for him—he still scribbles and delves among dead men's bones. Wake up, man, wake up; let "Alfonzo the Wise" sleep and crumble and his mortal elements fructify the earth. Exorcise the "perturbed spirit" that it may not "revisit the glimpses of the moon" to disturb your placid slumbers. "The Ptolemaic scheme of creation" is quite "a chestnut," and has been so for quite a long time! Be no longer the expectant "Rusticus" of the Horatian epistle, and tarry no longer with the fool on the bank of the river—where you were at my last advices. Try and be instant in modern thought; but, of all things, be no longer a mere picker-up of unconsidered trifles.

And now, my lear-ned pundit, and most sapient critic, and with an affectionate leavetaking—only temporary, I hope—I would add: Let not your soul be affrighted. But I want to give you some more "most astonishing quotations." Such trifling quibbles with words, the etymology of which you evidently do not understand, are *degrading* to you, and *humiliating* to those who love you. (Take down your dictionary and study the difference between the two words.) They are nugæ, *petites ridicules*, "springs to catch woodcocks," unworthy of any mind that has a thought beyond an oyster, and especially to a great mind like that of my erudite and distinguished critic. Let's have another *critical squib* from you soon. They are a cooling and refreshing divertissement, and serve to mitigate the present fervid heat. But let me beg that you lead us no more into the gloom of the sarcophagi, mau-solea, cromlechs and crypts of the long-forgotten dead. Wake up, man, wake up! *Living modern thought* is now the need of the hour and the day. With full consciousness of the waste of time and paper with which to give any heed at all to your foolish scree, it remains only to add, in diplomatic parlance, the assurances of my most distinguished consideration.

JAMES ALLAN CARMICHAEL.

A new State Homœopathic Hospital for the Insane is to be established on Collins Farm, Collins, Erie County, New York.

—Dr. J. S. Pyle (*American Journal of Politics*, December, 1893), enters an indignant protest against the existing wasteful custom of executing criminals, who, in the hands of scientific men, might be utilized for the best interests and enlightened development of humanity. The *modus operandi* of the mental processes can never be made clear save by experiment on the living brain, and the restrictions imposed on scientific research in this direction are something lamentable. Moreover, the criminal is a debtor to society, and ought not to be hurried off the stage until he has settled his score. The subject would be kept under anæsthetics during the investigations.

RETROSPECTIVE DIETETICS.

Diet in Ulcer of the Stomach.—Dr. Roux (*Journ. D'Hygiène*) declares that "in ulcer of the stomach, foods should be chosen that are digested in the intestines, such as milk, eggs, starches, fruits, and green vegetables; farinaceous substances and eggs should constitute the chief diet. Lentils are preferable to potatoes and beans; among green vegetables salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs."

The Regimen of Diabetics.—Professor Ebstein refers to the danger of producing coma in diabetics by changing the diet too rapidly. Even when the diabetic symptoms are most favorably influenced by a strict regimen, he fears a total suppression of amylaceous diet will often result in coma—an accident that is indicated by the presence in the urine of acetic acid, as determined by a solution of chloride of iron. He formulates the following absolute rule: If the urine of a diabetic patient gives an intense red coloration with a solution of perchloride of iron, that is to say, if large quantities of acetic acid are present, amylaceous food is not to be entirely suppressed, but allowed to be ingested in small quantities with circumspection.

Hypodermatic Alimentation.—Caird (*Edinb. Med. Journal*, September, 1893) reports a case of extreme weakness and emaciation due to malignant stricture of the oesophagus, which was improved by intramuscular injections of sterilized olive oil. In the course of a week, from three to four ounces of oil were injected into the gluteal region. There was no pain or inconvenience caused by the injection. Sugar was occasionally combined with the oil. None of the skin punctures inflamed. There seemed no limit to the amount of oil a patient can tolerate.

Cancer and Pork.—Those eminent investigators, MM. Verneuil, of Paris, and Roux, of Lausanne, are disposed, as the result of observation and research, to regard cancer as being caused most frequently by the use of pork. M. Verneuil declares that he has observed in the course of his surgical career that the Israelites, who follow closely the law of Moses respecting the use of pork as an article of food, are always refractory to cancer, and this idea had presented itself afresh in connection with two special cases.

Cheese as an Article of Food.—A writer in *Good Health*, while anticipating no sympathy with his views on the part of the cheesemakers, does not hesitate to express his most decided opinion that cheese as an article of food is wholly unfit for human consumption. Here is a little experiment which, he says, ought to be sufficient to convince anybody of the questionable character of cheese:

Take a boiled potato, cut it in two, taking care to use a knife which has been previously well boiled. Avoid exposing the cut surface of the potato to contamination with dust from the air, boiling the potato with the cut surface downward. Place the potato on a deep plate with the cut surface up, and cover quickly with a bell glass—a glass butter dish will do. Now cut off a bit of the cheese and carefully and quickly place it in the centre of the cut surface of the potato. Replace the glass cover, and pour into the plate a sufficient amount of boiled water to cover the edges. In a few days a luxuriant growth of mould will appear upon the cheese, showing that it contains a great quantity of microbes; and on moving the bell glass, a most repulsive odor will be observed—a most pungent advertisement of the fact that cheese is filled with the agents of putrefaction and decay.

The writer is very fond of cheese, having acquired an abnormal liking for this unwholesome article when a boy, but nevertheless he has, from principle, abstained from its use for many years.

Raw Meat in Diarrhoea.—A treatment advocated by Trousseau, consisting of pounded raw meat and meat juice, has been found useful in a class of cases where

farinaceous food is not well borne. The diarrhoea associated with teething in young children sometimes yields to this treatment, after resisting all other means. The pounded meat may be given with a little salt or sugar, or in jelly, or it may be strained into beef tea, and given slowly by teaspoonfuls. If this diet does not carry with it sufficient liquid, the quantity may be made up by giving water with some white of egg in it, and nothing else.

Dietetic Treatment of Patients Threatened with Cerebral Hemorrhage (Dr. Joseph Collins, in *Food*).—The diet for these patients, varying as it must with individuals and their digestive peculiarities, should be mainly of carbohydrates, sparingly of hydrocarbons, and still more sparingly of nitrogenous food-stuffs. The essential points to remember about the latter two are, that the first is given as an energy producer and as an aid in the complete oxidation of other food-stuffs, and that when the last one is administered it should be seen that its complete oxidation is thoroughly performed. So much for the administration of the organic food-stuffs. A word concerning the inorganic. Water, particularly, is necessary. The important part played by water in the treatment of arterial degenerations, particularly when such degenerations are dependent upon improper and insufficient metabolism, is not easily overestimated. The presence of it in the digestive tract, influencing as it does the rapidity of osmosis, filtration, and the other principles involved in absorption, and its effect in lowering the specific gravity of the blood after it is absorbed, are both very important, not to speak of its being the vehicle for the removal of most of the effete matters from the system. It favors absorption, facilitates oxidation, and promotes thorough metabolism. In all cases of arterial degeneration, with threatened cerebral apoplexy, water should be given in small quantities, frequently repeated, and should thus become a staple part of the diet.

The Value of Lemonade.—From *Leonard's Illustrated Medical Journal* we learn that the well-known chemist, M. Girard, chief of the Paris municipal laboratory, has lately been engaged in making researches concerning the bacilli of cholera and typhoid fever, and in doing so he has once more proved the efficacy of acids in destroying microbes. He finds citric acid to be the most useful and powerful of all. One gramme, he says, added to a quart of tainted water, will destroy all the microbes that may be in it. Consequently, he recommends the use of natural lemonade as an excellent beverage at all times, and especially during epidemics. If necessary, a little bicarbonate of soda can be added as a means of neutralizing the acidity of the lemon.

Bernheim's Nutritive Enema.—The *Union Médicale* gives the following formula: Concentrated bouillon, ten ounces; pulp of boiled meat, an ounce; Malaga wine, six drachms. Such an enema, administered every three hours, it says, is sufficient to support nutrition.

Maltine Bread.—According to a writer in *Food* (April, 1894) some experiments in bread making, the object being to find a method which would produce a bread which should have a larger percentage of soluble matter than by the ordinary process, have been conducted by Mr. C. Von Egloffstein, of Yonkers, N. Y., who is, perhaps, more experienced in handling digestive ferments, and especially diastase, than any other chemist in the country.

Ordinary bread made with flour, milk and yeast was used, and then bread made in exactly the same way, except that two teaspoonfuls of maltine were used to each pound of flour. The loaves so made were baked in an oven at about 300° F., which is the ordinary baking temperature, then dried and powdered, and water at the temperature of 100° F. added. At the end of an hour the matter in solution was separated by filtering and washing, when analysis gave the following results:

Ordinary bread, soluble matter, 15 per cent.

Bread, maltine added, soluble matter, 40 per cent.

In the next experiment the loaves were sliced and put into the oven until toasted. The results were:

Ordinary bread, toasted, soluble matter, 15.80 per cent.
Bread, with maltine added, toasted, soluble matter, 39.00 per cent.

In toasting ordinary bread a temperature of 360° is required to brown it, whereas in maltine bread 300° is all that is needed. This explains why toast made from maltine bread is superior for the table to that made from ordinary bread, as the temperature of 360° is sufficient to scorch the surface of the slice before the inner layers are affected, and the result is that toast as usually served is burnt on the surface and underdone inside.

Maltine bread is more spongy and lighter than ordinary bread, as the maltine added is a food for the yeast, therefore the amount of carbonic acid gas set free is increased. It is also more palatable, or, as the bakers would say, more nutty. It also retains its moisture longer, on account of the hygroscopic properties of the maltose.

On account of the difficulty children have in digesting starch, it will be found of great service to take the toast made from maltine bread, powder and mix with hot water, boil a few minutes, strain and mix with milk. It should prove an ideal food for infants.

Not only can maltine be used to advantage in making baker's bread, but in the domestic kitchen it can be employed in making bread and biscuit of all kinds, as well as cake and pastry. It is only necessary to put two teaspoonfuls of maltine to each pound of flour or meal used.

Milk Diet for Eclampsia.—From a new study of this formidable disease, Dr. Charpentier, of Paris, *Arch. de Tocologie*, has been led to the following conclusion: As every albuminuric pregnant woman is liable to eclampsia, and as milk diet gives such marvelous results in albuminuria, and especially in the albuminuria of pregnancy, the urine of pregnant women should be examined with the greatest care; and if albumine be found, in no matter how small a quantity, milk diet, absolute and exclusive, should be instituted at once. This is the best prophylactic treatment of eclampsia.

Effect of Tea and Coffee on Digestion.—A German physiologist, Schultz Schultzenstein, *Zeitschrift F. Physiolog. Chemie*, 1881, subjected chopped boiled egg to artificial digestion with hydrochloric acid, adding in different cases pure water, tea, and coffee. The percentage of albumen digested by the pure acid was 94, with the water, 92, with the tea, 66, and with the coffee, 61. Thus the addition of pure water affected the digestion little, but the tea and coffee lessened it very materially. In the experiment the egg was chopped into millimeter cubes. In a previous trial, in which the egg was not chopped so fine, the presence of tea and coffee was even more unfavorable.

Milk Diet as a Preventive of Scarletinal Nephritis.—Dr. William H. Flint (*N. Y. Med. Journ.*) advises a milk diet during and after the febrile stage, with a view to the dilution of the urine and the consequent prevention of nephritis. When for some reason a milk diet is not well borne after convalescence is established, two solid meals are to be allowed daily, consisting of chicken, oysters, fish, cream, butter and eggs. Care should here be taken that the patient gets a sufficiency of warm drinks, with the addition of some lithium, sodium, or potassium citrate, or carbonate.

Dietetics of Gout.—Strong wines, like port, Madeira, and sherry, stand in front rank as gout producers. Next to these come porter, ale and stout. Lager beer will, in some constitutions, develop gout. Whiskey, brandy, and other distilled liquors are not gout producers. Claret, hock, and other light wines, rarely induce gout. Cider is also an innocent beverage. From the fact that some of the sweet wines, like Malaga, are not as quick gout producers as Madeira or sherry, Dr. James Tyson concludes that liquors containing alcohol in combination with other substances, especially sugar, are potent gout developers.

A diet of cornmeal mush, bacon, ham and eggs, stewed celery, with stale brown bread and an abundance of water, with only an occasional meal with beef and mutton, and

fish at any time, suppers to consist of crackers and milk, has been found well calculated to discourage the invasion of gout. It is said that phthisical patients are never gouty, so that there is some comfort in the latter condition. Gouty persons are generally good feeders. This may be one of the reasons why they are exempt from phthisis.

The Dangers of Milk.—The fact that milk, as ordinarily furnished, contains millions of microbes is now so generally known, says *Modern Medicine*, that in the cities, at least, it may be supposed that the practice of submitting cow's milk to some sort of sterilization, before feeding it to a young infant, is quite common.

From observation, we are led to believe, however, that most mothers, perhaps most physicians also, place too much confidence in the sterilization of milk. Neither the Pasteurizing nor the boiling of milk destroys all the microbes which it contains. Even when kept on ice, milk which has been thoroughly boiled, after two or three days gives the plainest evidence of decomposition. This is, of course, due to the fact that the spores of microbes capable of setting up decomposition processes in the milk, have survived the process of sterilization.

A more minute examination of milk which has been sterilized will show that within six or eight hours, under ordinary conditions, there is found to be a decided increase in acidity. The period when acidity is first noticed may be said to be the end of the period of incubation of the living spores contained in the milk, as the acidity is evidence of the growth and bacteriological activity of the germs.

When germs begin to grow, they will begin also to multiply and increase with very great rapidity. It is hence apparent that if the purpose of sterilizing milk is to diminish the number of microbes it contains, then sterilized milk is wholesome only during the period of incubation and before acidity appears. It is, of course, possible to prolong the period of incubation indefinitely by repeating the sterilizing process at sufficiently frequent intervals, or by reducing the milk to a temperature at which microbic activity cannot occur.

Every mother who is feeding a young infant with cow's milk should be supplied with litmus paper, by which the acidity of the milk may be tested, so that she may know when the milk administered is of a character more likely to result in disease than in healthy nutrition. The perils to which infants fed upon cow's milk are almost universally exposed, is evidenced by the great fatality which attends the artificial feeding of young children.

Dr. H. C. Plaut, of Leipzig (*Zeitschr. F. Hygiene U. Infections-Krankheiten*), in a recent investigation of this subject, found, as a rule, that fresh milk, delivered in the morning in the cities, has already advanced beyond the period of incubation, and is unfit for use by young children. Of forty-seven infants whose supply of milk was carefully investigated, eighteen experienced digestive disorders and six died. In some instances the milk was examined before the illness of the infant, and in every case was found to be unfit for food. In most of the entire number of cases, the milk was found to be bad. It was mentioned as good in four cases.

The investigator insists that the principal cause of digestive disorders in young children, and the bad nutrition so often seen in these cases, is not to be found in the character of their homes, nor in the bad conditions to which the milk is subjected after it is purchased, but in the bad handling of the milk before it is sold. He suggests the enactment of a law requiring that the milk should be cooled immediately after being received from the cow—even at the stable. This he thinks quite as important as that the home of the child should be maintained in a sanitary condition.

—The *New York Sun* says that Dr. E. L. Keys received \$60,000 for services to Mr. Vanderbilt during a four months' trip on his yacht, *Valiant*.

The New York Medical Times.

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

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ALFRED K. HILL, M.D.

Business Communications should be addressed, "Publishers, 528 Fifth Ave.," and Checks, etc., made payable to THE NEW YORK MEDICAL TIMES.

Published on the First of each month.

OFFICE: 528 FIFTH AVENUE, NEW YORK.

NEW YORK, AUGUST, 1894.

Changes of standing advertisements and communications in regard to that department, should be addressed to BENJ. LILLARD, Advertising Manager, 72 William St., N. Y.

INFANTILE SOURVY.

THIS disease is more common than is generally supposed, and is often diagnosed as infantile rheumatism, which in many of its symptoms it closely resembles. The urine, although generally acid, as in rheumatism, is sometimes alkaline; but, unlike rheumatism, there is sooner or later a soreness of the mouth and the characteristic scorbutic sponginess of the gums. Swellings may appear about the joints, red, tense and very painful. The slightest movement produces pain, and the child shrinks from the ordinary bath. The temperature is above normal, and as the disease progresses the pulse becomes more rapid than the temperature would warrant, and very feeble. The soreness of the gums and mouth is the leading point of differentiation from rheumatism, and, with the other symptoms, points unmistakably to the character of the disease. It is worthy of note that this disease is much more common among the prosperous and rich than among those in more moderate circumstances. The mothers in the latter class usually nurse their own infants, while the former, from many causes, more frequently resort to artificial feeding, and, as this is specially a disease arising from faulty nutrition, the cause is apparent. Even the mother's milk does not always furnish the necessary amount of nutrition. In several cases which have come under our notice, not only the mother's milk, but condensed milk, and that which has been sterilized, as well as nearly every form of prepared food which

contained milk, acted as a poison. The reason was, there was an absence of lactic acid, the first acid of digestion, which, when supplied in the form of matzoon, or a small amount of lactic acid added to pure, fresh cow's milk, remedied the whole trouble. The change of milk sugar, always present to a greater or less extent in fresh milk, into lactic acid, is undoubtedly the work of bacteria, and is always present in normal digestion. It will be seen that if milk sugar is deficient in quantity or in excess there may be often a deficiency of lactic acid or an excess. In the former case there may be an entire absence of normal or abnormal digestion, and the development of ptomaines, acting as more or less virulent poisons; in the latter case, from the effects of abnormal ferments, the atoms of the lactic acid may be rearranged into alcohol or carbonic acid, or into butyric, carbonic acid and water, in either case giving rise to the flatulence and pain often noticed in uncertain digestion.

Of course, in digestive disturbance the first attention is always directed to the food. In case the movements are filled with curds, the intestinal canal is emptied of its contents by some mild laxative, like castor oil. If the child is nursing, notwithstanding the milk be flowing from the breast, it may be because the breast has no power of retaining it, and the child is starving. Nearly all the prepared foods in certain conditions are of great benefit, but if milk is selected it should be condensed milk, the very process of condensing having sterilized it; or cow's milk, fresh and pure. The milk filtered through absorbent cotton not only frees it from all impurities, but removes a large portion of the bacteria. The process, so popular the last few years, of sterilizing milk by subjecting it to a heat of 212° , is rapidly giving way to sterilization at a low heat, called Pasteurization, as it is found that a heat of $160-170^{\circ}$ for fifteen or twenty minutes is quite as effective in destroying bacteria and developed germs of any kind as the heat of 212° , formerly considered essential. A heat above 170° destroys the starch fermenting ingredients of the milk, so essential to the infant. The milk sugar is changed or destroyed, and the fat and casein rendered much more difficult of assimilation.

Infantile scurvy, as well as infantile rheumatic fever, can always be traced to mal-nutrition, and can usually be relieved without drugs, with a proper regulation of diet. Two cases will serve as a fair illustration. A child a year old was nursed almost from birth, but for three or four months it

had shown no improvement in flesh, with movements always in a fluid state, and often with flatulence and pain. The limbs were painful on movement, the temperature high, the bowels in a bad condition, and the gums swollen and spongy. The nurse was immediately dismissed, the child placed on condensed milk, the bowels moved with castor oil; a little orange juice was given from time to time, and also mutton broth or beef tea. The improvement was immediate, and as it continued, a half of a large orange was given night and morning, and a liberal supply of broth. The convalescence was rapid and complete.

Case II. was a child of the same age, bottle-fed almost from birth. For several months it did fairly, then the improvement ceased, and the weight, for a time stationary, slowly decreased. The bowels became so constipated that a movement could only be effected with great pain. The general condition pointed to the slow but sure development of scorbutic trouble. The food was entirely changed. Milk was given of proper strength, mutton or beef broth every day, and half an orange night and morning. The change was immediate; the moaning cry was no longer heard, the bowels become perfectly natural, and the little child slowly sinking into the arms of death, again filled the house with the sunlight of its bright and happy life. The hot weather of summer seems an appropriate time to discuss questions pertaining to food and health, and hence we have drawn upon a long experience in presenting a few facts which may possibly be of interest.

THE DRIFT OF MEDICAL THOUGHT.

A WRITER in *Borderland*, speaking of the general drift and progress of medical thought, says "that in the evolution in the art of healing we seem to be on the eve of three great changes. The first is the recognition of the virtue of the greatly reduced but more frequently administered infinitesimal doses; the second is the recognition of the value of the vegetable as compared with the mineral drug; and the third is the recognition of the value of those subtle curative agencies supplied by the animal world, as seen in magnetism, in hypnotism, and in those phenomena which show the influence of mind over matter." The freeing of medicine from its crudities and obtaining the atomic and molecular life of the plant or mineral has developed everywhere new methods of treatment, founded on

closer observation of pathological changes resulting from toxicological action and those physiological and chemical changes constantly going on in the human organism. The way is rapidly opening for that more advanced philosophy to which all these steps have been preparatory, for a more full elucidation of the power of mind over matter, and a control of those conditions of nerve and spirit force upon which health and disease depend. The psychological laboratories now being established by Government and universities should be extended to every medical school, and form an important part of the course of medical study.

The illustrations we gave in our editorial on "Brain Building," in the July issue of the *TIMES*, from Prof. Elmer's psychological experiments, only faintly foreshadow what might be accomplished, if fuller knowledge of these matters should be extended to every coming physician. If every insane hospital were equipped with a psychological laboratory in proper hands, facts of the utmost importance in repairing the mental wrecks within and without the walls of the institution would be discovered and put in practice. The first institution which awakens to the absolute necessity of this step and puts it in practice will pioneer a work which will open an illimitable field in a department which, notwithstanding the advances of the past half century, has by no means kept up with the progress of other departments of our profession.

MENSTRUAL INSANITY.

EVERY physician knows from professional experience how powerful an influence is often exerted on the mental life of the individual by the act of menstruation, so powerful often as to produce positive insanity. This is an important fact to consider from a medico-legal standpoint, and also a most important fact to consider in the family relation. The irritability, the madness—for it is often nothing less—the jealousy and display of temper kindled into activity, at these times, should be looked upon, not as the result of absolute wickedness, but as a lack of self-control from reflex action, and treated in all cases with patience and kindness. Menstrual irregularities, instead of being looked upon as they often are, as something which must be borne and for which there is no help, should always be reported to and receive the most thoughtful attention of the physician. The irregularities show some derangement of the

vitality and the circulation of the sexual organs, a derangement pointing most unmistakably to a careful study of the cause and a systematic and positive treatment. This one trouble is the source of more domestic unhappiness than almost any other, an unhappiness often leading to the breaking up of family and to the commission of positive crime.

EFFECTS OF WEATHER ON SCIENTIFIC WORK.—

(*Science*, February 16, 1894.)
—Dr. T. D. Crothers finds among brain-workers a settled conviction that many very powerful forces coming from what is popularly called the weather, control the work, and its success, of each one. But the majority of persons fail to recognize the sources of error that come directly from atmospheric conditions on experimenters and observers and others. In his own case he has been amazed at the faulty deductions and misconceptions which were made in damp, foggy weather, or on days in which the air was charged with electricity, and thunder-storms were impending. What seemed clear at these times appeared later to be filled with error. An actuary in a large insurance company is obliged to stop work at such times, finding that he makes so many mistakes, which he is only conscious of later, that his work is useless. In a large factory from ten to twenty per cent. less work is brought out on damp days and days of threatening storm. The superintendent in receiving orders to be delivered at a certain time takes this factor into calculation. The psychology of the weather offers a new and interesting field for investigation.

ON THE INDICATIONS TO BE DRAWN FROM THE URINE AS TO THE SAFETY OF ANÆSTHETICS.—At a meeting of the Clinical Society of the New York Post-Graduate School, Dr. W. H. Porter, (*Post-Graduate*, July, 1893) presented a paper on anæsthetics, and the indications as to their safety, presented by the state of the urinary excretion. The paper is worthy of careful consideration, and he draws the following practical deductions from this chemico-pathological analysis of chemical phenomena:

That by a careful study of the density of the urine and its causes, we are in possession of exact information by which we can determine the precise nutritive condition of the system, and be forewarned as to the possible outcome of the anæsthesia. It also enables us to judge which an-

æsthetic is best adapted to the individual case in question.

It teaches, moreover, that every public institution should have a paid physician who is competent to examine the urine, and determine through it the status of the physiological economy before giving the anæsthetic. It should also be the duty of the same physician to administer the anæsthetic, for he alone knows best which anæsthetic to select with a given condition of the system, and is also better able to guide the patient safely through the anæsthesia, than one who knows nothing of the constitution of the patient except from a second party.

PROFESSOR NEISSER says: The iodide of rubidium has the same effect on the circulation and the general system as the iodide of potash. The drug does not disturb the stomach, as is often the case with the potash, and has no disagreeable taste. Several prominent European specialists speak strongly in preference of the rubidium over the, potash because its effects are equally marked, and it is better borne by the stomach and can be given more freely in debilitated individuals with weakened heart action. The iodide of strontium has also been recommended as a substitute for the potash. Both drugs are given in the same doses as the potash. The iodide of potash is so important a drug in our materia medica, but so disagreeable to the taste and the stomach, that a substitute, if equally effective, will be gladly welcomed.

THE MUCH MALIGNED SEWER GAS.—

At one of the general sessions of the recent congress of American physicians and surgeons, no less than three papers on sewer gas were presented, and in two of these the innocuousness of the air of sewers was advocated. It is asserted that exact methods of investigation show that, as ordinarily found, it does not differ conspicuously from the air we are accustomed to breathe; that there is a comparative poverty of bacterial life in sewer gas—that, in fact, more disease germs are found in the air of houses and school-rooms than in the air of sewers; that there is no conclusive demonstration that sewer gas stands in causal relation to the diseases for which it has been held accountable; that the worse the odor of a sewer, the less the danger of contracting disease from it—particularly diphtheria, etc., etc. A writer in a recent number of the *Pall Mall Magazine* confesses to a melancholy amusement in

reading similar statements in the scientific journals of our "kin beyond the sea." He finds it grimly diverting to now learn, "after the hundreds of sanitary tracts in which the deadliness of sewer gas has been an axiom of faith, after the thousand and one deaths from it in the contemporary novel, that it may be welcomed without fear to our hearts and homes." And opines that "we may yet live to see it manufactured artificially for the improvement of the public health, and conveyed to our overcrowded drawing rooms with all the paraphernalia of pipes and the mendacious meter."

AN ECCENTRIC RUSSIAN PHYSICIAN.—

Professor Zakharin, of Moscow, one of the physicians in attendance on the Emperor of Russia, and since the death of Dr. Botkin, the leading consultant in Russia, is renowned for his eccentricities as well as for his skill. On entering a house he requires all the doors to be left wide open, all the clocks stopped, and dogs to be securely fastened away from his presence. He removes his over-garments gradually and never all in one place; his furs in one room, his overshoes in the next, his gloves in a third, and so on. He insists on absolute silence on the part of the patient and the family, and will have no questions answered save by "yes," or "no." His dread of over-influence is almost a mania; and his attention to detail is such that even in the simple cases he investigates the whole family history and social relations before directing treatment. His examination of the patient is sometimes three hours long—even in ordinary conditions. One of his favorite theories is that of an idopathic hypertrophy of the heart, upon which he has based a rule of living: "It is necessary to rest *before* getting tired." Accordingly, he has the habit of sitting down every seven or eight steps. Zakharin is now sixty-five years old, has been Professor of Clinical Medicine at Moscow for thirty-five years, and is reported to be worth over \$1,000,000.

A BITE of a dog is very apt to be speedily followed by the death of the animal. Pasteur entirely disapproves of thus destroying the possible evidence of rabies by killing the dog. Pasteur says if the dog has rabies, the characteristic symptoms will speedily develop themselves, and the animal will certainly die in eight days. If, at the expiration of that time, no symptoms of rabies have been observed, the bite cannot cause hydrophobia, and there is no reason that the animal should be killed.

NITROUS OXIDE GAS.—Nitrous oxide is now being used in general surgery, and is growing eminently satisfactory. It has been an almost universal belief among the medical profession that this agent is useful only in cases requiring brief periods of anæsthesia, such as pulling a tooth or opening an abscess. But it has now been found to be equally desirable in major operations, such as amputations, requiring half an hour or more for their completion. The rapidity with which patients reach the state of surgical anæsthesia under its use, its freedom from the historical horrors associated with chloroform and ether, its pleasant effects while consciousness lasts, the quick recovery from under its influence, and the complete freedom from nausea are all commendable features. More important than these, however, is the fact that it is less dangerous than ether or chloroform. It is, also, often an advantage to let the patient come up from under the influence of the anæsthetic for a few moments. This can be done while using nitrous oxide, and without causing any appreciable delay in the operation, because the patient can be so quickly put under its influence again. This is not possible with any of the slower anæsthetics.

CIGARS AND INFECTION.—The smoking community must feel grateful to Dr. Kerez, of Rome, for alleviating their not unnatural alarms as to the possibility of becoming infected with tuberculosis from smoking cigars, in the manufacture of which the saliva of the work-people is so often made use of, says the *British Medical Journal*. The well-known fact that, possibly from the lightness of the work being attractive to such people, large numbers of cigar makers are more or less affected with consumption, makes the risk from this source all the more obvious. Dr. Kerez, however, has had cigars made by the ordinary method, with this exception, that in each part of the process where the operator usually applies his mouth or wets the tobacco with his saliva, the leaves were moistened with saliva known to contain the germs of tuberculosis. The cigars thus made were then dried and packed in the ordinary way. At various dates afterwards inoculation experiments were made with these cigars, with the result of showing that while they retained their infective property as regards tuberculosis for ten days, they were found, when kept for any longer time, to have lost the power of communicating the disease, and the guinea-pigs employed suffered no ill effects whatever from their inoculations.

REAL GRAHAM BREAD.—At a recent meeting of the Paris Société de Thérapeutique, M. Bardet stated that bread containing less starch and a larger proportion of albuminoids than the common article, is required by vegetarians, both as nourishment and to prevent constipation. Hence Sylvester Graham advised the use of unbolted wheat meal bread, as comprising all the nutritive principles of the grain, together with the fatty matter of its embryo. The so-called Graham bread, however, which is sold in bakeries, does not deserve the name; its color is not enticing; it is difficult of mastication and unpalatable; it contains particles of bran which stick between the teeth; also, it is mixed with rye flour to render it more laxative. In order to obtain genuine Graham bread, M. Bardet began by getting an intelligent miller to prepare him a flour from the entire grain. The latter was subjected to several successive processes. First, it was coarsely ground, to separate the flour, then the branny portion was again triturated, and reduced to fine particles by passing between cylinders. In making the bread but very little yeast was employed. The temperature of the oven was kept comparatively low, and the loaves were baked for an hour and a half, instead of forty-five minutes. This bread had an agreeable taste and odor, was highly digestible, and contained forty per cent. of gluten, instead of the twenty-five per cent. usually present.

THE INTERNATIONAL MEDICAL CONGRESS.—The *Medical Record*, with the aid of a critical review in the *Gazette des Hôpitaux*, summarizes the rather barren results of the work of the Congress in the way of therapeutics. Dr. Petresio, of Bucharest, brings forward additional facts regarding his treatment of pneumonia with large doses of digitalis. He claims the dose reduced the mortality from 7.15 to 1.22 per cent. He gives from 120 to 180 grains of the leaves during the twenty-four hours, and says this treatment invariably jugulates pneumonia in a few days. This seems to us very much like the famous receipt for learning Dutch, viz.: "Break the student's jaw, then knock his brains out." Dr. Goffordi, of Naples, calls attention to the value of lactose as a diuretic, particularly in heart disease. Dr. Peci praises very highly the use of phenicoll in malaria. He gives from eight to fifteen grains a day, and after having broken up the paroxysm, continues the drug from five to six days, in association with quinine or arsenic. Dr. Tison thinks

the nitrate of aconite, in doses of one six-hundredth of a grain, twice a day, useful in facial erysipelas, relieving the pain and shortening the attack. And these are about all the "new ideas" of value the *Medical Record* finds on a careful survey of the therapeutic department of the International Congress at Rome. No wonder our contemporary asserts "the result of the study has not been very fruitful."

PATHOGENESIS OF LOCOMOTOR ATAXIA.—At a meeting of the Imperial Royal Medical Society of Vienna, held February 23, 1894, (*La Semaine Méd.*), Professor Obersteiner stated the results of investigations which he had been carrying out, in conjunction with Dr. Redlich, on the subject of the pathogenesis of locomotor ataxia. By means of sections of the spinal cord, these authors have ascertained that there exists a decussation of the posterior roots at the point where they penetrate into the cord. This decussation is supposed to play a large part in the pathogenetic processes of tabes. According to Prof. Obersteiner, this affection starts with meningitis, resulting in compression of the posterior roots, which soon causes their degeneration. This theory accounts very well for the anatomical alterations, as well as for the clinical manifestations of tabes. It explains also the relationship between tabes and syphilis, it being known, indeed, that syphilis tends to determine thickening of the connective tissue. Lastly, it interprets also the coincidence of atheroma with tabes.

THE managers of the Collis Farm Insane Hospital met at the farm July 13th and organized, with the election of Dr. Wm. Tod Helmuth as President and Dr. H. M. Paine Secretary, and Dr. S. Louis Soule, of Collins, as Treasurer. An inspection of the farm by the managers satisfied them of the capabilities of the place for the work contemplated and the wisdom of the selection.

THE Chambers Street Hospital is about to remove from its present location to the corner of Jay and Hudson Streets. The new hospital is a large, five-story building, thoroughly equipped for its work in every department. Some idea may be given of the amount of its work, from the fact that three ambulances are kept busy night and day, and that the number of visits to it are over sixty-five thousand a year, a large majority of which are surgical and accident cases from the downtown district.

**A "CONFINEMENT" THAT DIDN'T CON-
FINE.**—A medical man who had practised among the North Dakota Indians, writes that their women as a rule had very easy labors; in fact, it was no trouble at all for them to have children. At one time he saw several women coming towards the only store at the agency, across a wide open space in front, each carrying on her back a bundle of sticks. Suddenly one stopped short, looked a little wild, dropped her bundle of sticks, spread her feet apart, strained a moment, and then stopping, made a pass towards the ground with her knife that she drew from its sheath, picked up something which she wrapped up in her shawl, and leaving her bundle of sticks for some one else to pick up, passed on into the village. That was a confinement, and the child was born then and there.

IN the list of officers of the Metropolitan Hospital, which appeared in connection with the engraving of the hospital in the July number of the TIMES, the name of Dr. George Taylor Stewart, Chief of Staff of the hospital, should have appeared as Superintendent of the Training School.

**THE FIRST CHINESE MEDICAL COL-
LEGE.**—The first Chinese medical college worthy the name established by the Chinese Government was recently opened with formal ceremony at Tientsin. The project owes its origin to the intelligence and energy of the Viceroy of China and his wife, who constructed the necessary buildings, and placed the direction in the hands of a distinguished graduate of the University of Dublin, selected by the late Sir Andrew Clark. The establishment of the college is attributed to the efforts of the Viceroy's medical attendant, Dr. Irwin, and to the influence of a Canadian woman, Dr. King. Some twenty well educated English speaking Chinamen have enrolled themselves as students, and the work of instruction has already begun.

—Dr. Vilette recommends a 5 per cent. injection of ichthyol in gonorrhoea, on account of its being antiphlogistic, analgesic and germicide.

WHERE IT COMES IN.—"Paw, is there any difference between a cold and an influenza?"

"If the doctor calls it a cold, the bill is about \$4. If he calls it influenza, it's about \$8. The difference is \$4, my son."—*Chicago Record.*

—The St. Louis *Clinique* has passed into the hands of Dr. Emory Lanphear, Professor of Surgery in the College of Physicians and Surgeons. Dr. Lanphear will conduct the journal in the interests of that school and of the medical profession of the West.

BIBLIOGRAPHICAL.

GONORRHOEA: Being the Translation of *Blenorrhoea of the Sexual Organs*. By Dr. Ernest Finger Docent, at the University of Vienna. One Volume of 300 Pages, Octavo, \$3.00. New York: Wm. Wood & Co.

The third revised and much enlarged edition of this standard work covers the ground of blenorrhoea of the sexual organs, in all stages and with all its complications, more fully than any other work.

A JOURNEY IN OTHER WORLDS, a Romance of the Future. By John Jacob Astor. New York: D. Appleton & Co., 1894.

This book belongs to the school started by Jules Verne. The author has tried to avoid dry details, by introducing a chapter in the very beginning whose real position is in the middle of the book. The first half of the book, the visit to Jupiter, is scientific; the other half, the visit to Saturn, is religious. The stories about the geological monster are very well told, and will be specially interesting to children. The theological portion is a curious jumble of Calvinism, dead long ago, with a strong dilution of spiritualism, spirit writing, materialization, thought reading, astral body, paradise, hell, sheol, even to Adam and his apple—everything is there. We wonder why our author did not send his heroes on their voyage of discovery to the fossilized ark of Noah on the top of Mount Ararat. However, it is the first attempt of our author, and as such he has given a good account of some of the scientific lessons he learned at school.

SOCIETY REPORTS.

THE LOUISVILLE SURGICAL SOCIETY, FEBRUARY MEETING, 1894.

(Stenographically Reported by C. C. Mapes.)

THE PRESIDENT, DR. A. MORGAN VANCE, IN THE CHAIR.
A LARGE SARCOMA OF LEFT KIDNEY IN A CHILD FIVE YEARS OLD—NEPHRECTOMY—RECOVERY.

Dr. W. O. Roberts: The first of last December I was called to Shelbyville, Ky., to see a child who will be five years of age the coming April. The history of the case was about as follows: The mother stated that four weeks prior to my visit, she noticed that the child's abdomen was much larger than it should be, and, examining it she discovered a tumor considerably larger than a man's double fist. The child had never complained of any pain or discomfort in any way. The mother was led to make the examination simply by the prominence of the abdomen. While running about, four days before my visit, the child had fallen flat on his face. He then commenced complaining a great deal about his abdomen and was put to bed. At the time of my visit his temperature was 100° F. and had been so for three days. There was considerable pain and tenderness over the left lumbar region; the child was lying in bed with the legs drawn up. Upon palpation, it was questionable whether there was fluctuation or simply elasticity of the tumor. I suggested that we aspirate to see whether the growth contained any fluid; this was done at three different points and nothing except a little blood secured. I then made the diagnosis of malignant disease of the left kidney. It was thought: by the physician who had seen the case previously that the patient had disease of the spleen. I made my diagnosis chiefly upon the tympanites along the region of the colon. I did not see the child again until the latter part of December. At that time the tumor had grown considerably; it filled the whole left side of the abdomen down almost to Poupart's ligament, and extended over about two or three inches to the right of the median line. The case was brought to this

city for operation, and on January 17th, at the Norton Infirmary, assisted by Dr. Anderson and a number of other gentlemen, I made first a short exploratory incision—a perpendicular one—for the purpose of settling the diagnosis as to the organ involved; it proved to be the kidney, as I thought. The spleen was perfectly normal as to size, but was pushed up, of course, by the growth. In this exploratory incision there was an opening made in a little vein on the surface of the tumor, which bled very freely, and it was with difficulty the hemorrhage was controlled. I had explained to the father before making the exploratory incision that if the tumor was found of such a character that it could not be removed without too great risk, the abdomen would be closed. When the bleeding occurred from the punctured vein, I, with the father's consent, went ahead and removed the tumor. I did the operation suggested by Abbe, whose paper I had a day or two before seen in the *Annals of Surgery*, which consists in opening the abdomen transversely instead of perpendicularly. The short incision made was about two inches, I suppose, to the outer border of the left rectus abdominis muscle. I then carried the other across the abdomen one inch below the ribs, back to the lumbar region and across the outer border of the right rectus; that brought me down directly upon the growth. We found the descending colon so closely adherent that it was with some difficulty we were enabled to detach it. When we had dissected down to the pedicle of the tumor, the child seemed so nearly dead, that I did not take time to pick out the ureter but tied off the body *en masse*. I found that the tumor grew from the fibrous covering of the kidney, only a portion of the kidney seeming to be involved in the growth; the kidney, however, was removed in its entirety, as I was afraid the other portion might be infiltrated, and which could not be detected at the time. After removal of the growth the wound was closed by three lines of continued sutures; it had to be done very rapidly, owing to the extreme condition of the patient. The peritoneum was brought together first, then the muscular structures, then the skin and fascia. The child was put to bed in almost a moribund condition; however, he rallied, and went along to recovery without an untoward symptom. He was discharged from the Infirmary yesterday in good condition, with the wound healed. The tumor, which I exhibit for your inspection, was found to weigh immediately after its removal seven and a half pounds.

DISCUSSION.

Dr. Turner Anderson: I want to congratulate Dr. Roberts upon his success in this case. I think it was the most formidable surgery that I have ever witnessed. Dr. Roberts kindly permitted me to assist in the operation. The transverse incision extended around almost to the spinous process of the dorsal vertebra, so that everything was thoroughly laid open. The adhesions to the descending colon were very extensive; the tumor was also adherent to the peritoneum and had to be dissected off. The whole procedure required the most painstaking, careful surgical work that I have ever witnessed.

Dr. I. N. Bloom: What length of time was consumed in the operation?

Dr. W. O. Roberts: About twenty-five minutes.

Dr. W. L. Rodman: I also wish to congratulate Dr. Roberts upon the successful result in this case. It is the second case of nephrectomy he has had. I assisted him in the first case, several years ago. The incision suggested by Abbe is perhaps a very good one; it certainly affords greater access to the kidney than the ordinary incision in front, but it strikes me as being questionable whether this incision of Abbe is better than the older operation very much like it; that is, the operation of König, in which he begins posteriorly and cuts anteriorly. The only difference is that Abbe goes through the peritoneum, while König does not. König dissects up a large flap of the muscles, and when he comes to the peritoneum it is pushed forward toward the median line; in that way he removes the kidney without doing injury to the peritoneum. The disadvantage in either operation would be the great liability of ventral

hernia. While the result in Dr. Roberts' case is very gratifying, so far as the primary result is concerned, I am very clear in my own statistics on the subject that these operations are done more to show what can be done with the knife than for any real substantial good that comes to the patient. Gross and others have shown very clearly that the mortality of nephrectomies for malignant disease is frightful; in the lumbar operation about thirty per cent., in the abdominal operation about forty-five per cent. One reason why the abdominal is perhaps more fatal than the lumbar operation is that severe cases are operated upon by the anterior route; you cannot remove as large a tumor by the posterior as by the anterior route. So, when you consider that the mortality in these cases is forty-five per cent., further, that no single case of cancer of the kidney has ever passed the three years' limit after operation, and that very few sarcomas have passed this limit; that many of them die on the table, others dying a few months after the operation, again, the liability of ventral hernia occurring, it strikes me as being very questionable whether this operation ought to be done or not.

Dr. H. H. Grant: I agree in the main with what Dr. Rodman has said in reference to operations for the condition under discussion, but in this case it appears that great benefit has been done to the child by the operation, and its life is probably prolonged. If this tumor is really a sarcoma, it is barely possible that the child will entirely recover, although, as Dr. Rodman says, these operations have not been done very frequently for sarcoma. I believe it is possible in some cases to cure sarcoma of the kidney by complete removal. Several cases are recorded of the prolongation of life and addition of comfort after such steps. And it is not impossible that extirpation of sarcoma may prove successful occasionally in this, as in other situations. With respect to the post-peritoneal operation for a condition of this kind: Although I have never had an opportunity to see an operation of this character performed, it seems to me that in the majority of cases where a tumor of this size is present, it would be almost impossible to remove it without doing injury to the peritoneum, and as at the present day we feel but little hesitancy in invading the peritoneal cavity, it is perhaps just as well to boldly open it, as suggested by Abbe, and understand in the beginning just what we were cutting, without fear of after results from invading the peritoneum. It seemed to me when I read Abbe's paper that it would not be an unwise thing to make posterior opening through the lumbar region at the time, which would allow thorough drainage and still not disturb the decubitus of the patient. It seems to me this would be an important additional step in the operation, and I believe if I had occasion to do an operation of this kind I would supplement anterior drainage by making drainage in that region.

Dr. W. O. Roberts: As Dr. Rodman says, this is the second case I have operated upon for malignant disease of the kidney, the first one being in 1885. This patient was referred to me by Dr. Anderson, who also rendered valuable assistance in the operation, and in that case there was recurrence of the trouble and the patient died inside of three months. However, there was prompt recovery from the immediate effects of the operation. Regarding the mortality in these cases: Statistics show that about fifty per cent., according to Abbe, die from the immediate effects of the operation. I think Keyes reports a case that lived four years after operation. In my second case, when the operation was undertaken, the father was advised of the opinion of all the gentlemen present that it was almost certainly a sarcoma; we told him that if we found it to be a sarcoma, and thought it best not to go on with the operation because of that fact, we would simply close the wound; but when the troublesome hemorrhage occurred I saw it would not do to close the wound, hence, after consulting with the father, went ahead and removed the growth. Referring to Dr. Grant's remarks concerning drainage: I will state in this case drainage was made from the posterior angle of the wound, with strips of iodoform gauze put down to the bottom of the wound, which drained very

satisfactorily. This was removed at the end of forty-eight hours, and another small piece introduced, which remained until the second dressing; then no further drainage was made. I think the operation as performed in this case decidedly best where the tumor is large. The advantage of incision at the outer border of the rectus muscle (Lanenberg's), over the one in the median line, is that you go through the outer layer of the mesocolon and avoid the vessels lying in the inner layer, and hence avoid the danger of sloughing of the gut. In the operation I performed in the case just reported there were no vessels to be tied. I believe that we can better get at the pedicle by the method pursued in this case than any of the others. In my first operation for malignant disease of the kidney I followed Lanenberg's method, which is rather more tedious than the one used in this case.

SEPTIC PNEUMONIA, RESULTING IN GANGRENE.

Dr. W. L. Rodman: On December 15, 1893, a young man, Mr. E. H., aged twenty-eight years, while working on the Louisville & Jeffersonville Bridge, fell with a span of the bridge a distance of rather more than one hundred feet. He was not able to say whether he was struck by any timbers or iron in falling. He received a fracture of the fifth, sixth and seventh ribs of the left side. The shock was quite profound, but he recovered from it with reasonable promptness. It was noticed at once that one of the ribs must have penetrated the lung, as he spat blood copiously with each expectoration, and air could be felt in the cellular tissue over the fracture. This became more marked during the day, until the whole side of the chest was quite distended with air, which also passed down the left side of the body; the scrotum was especially distended, being as large as a child's head. He got along very well for three days, never having a decided rise in temperature, suffering only at times from short, painful paroxysms of coughing. On the fifth day there was an elevation of temperature, it reaching a point as high as 104° F. That was the beginning of as severe a case of traumatic pneumonia, which was of course septic in nature, as I have ever seen. The left lung was solid from apex to base. He had a hard time getting over the pneumonia, but on the fourteenth or fifteenth day he showed symptoms of improvement; the temperature remained very high, hardly ever less than 104° F.; there was no effusion in the pleural cavity. On the sixteenth day his temperature dropped somewhat, and he commenced expectorating a great amount of very offensive matter. It was so extremely offensive that it made all the nurses and patients sick. It was necessary to keep all the windows open, although the weather was quite cold. There was evidently gangrene of the lung; he soon went into a condition of profound sepsis, and I had very little doubt but that he would die. While the temperature was low he had at all times a very copious sweat; the pulse became very frequent, 130 to 140, the skin had that peculiar muddy appearance of sepsis, and he was in a very critical condition. A consultation having been had, it was thought advisable to resect his rib and to see if we could not find the original opening in the lung, and following that as a guide open up the abscess in the gangrenous part of the lung. This was done, I think about the twentieth day after the accident. The sixth rib was resected, a piece about four inches in length being removed. I used the Rongier forceps, which by the way I shall always use hereafter, as I consider it the best instrument for the purpose. Pus was encountered as soon as the rib was cut; the original opening in the lung was easily detected, and a large abscess was found in the gangrenous portion of the lung. The lung was packed with several yards of gauze in strips, and the man's recovery has been very gratifying indeed. He was better the day after the operation and has improved steadily ever since. The abscess was in the upper lobe of the left lung. He spat up the foul stuff for a week after the operation, some of it drained out through the incision, and for the last month he has seemed to be perfectly well. He is able to walk about the Infirmary, is gaining flesh and strength, and altogether his convalescence has been very satisfactory.

DISCUSSION.

Dr. Jas. S. Chenoweth: How much pus discharged from the wound?

Dr. W. L. Rodman: Pus was discharged from the wound for three or four days; after that time the discharge was only from the superficial part of the wound. It was packed every day for about eight or ten days and then allowed to heal.

Dr. Turner Anderson: I was very much interested in Dr. Rodman's report. As we understand pneumonia, I have been under the impression that such a thing as traumatic pneumonia was impossible. We may have an abscess or inflammatory process involving the lung, but a veritable traumatic pneumonia, as we understand pneumonia, is hardly admissible. Of course the treatment in these cases is plainly indicated—as soon as the abscess is detected, as soon as the lung becomes gangrenous—to practice external drainage. In this connection I wish to claim priority in the matter of practicing external drainage in pneumonia, as I believe I was the first to attempt such a procedure in this part of the country. The case was one of ordinary pneumonia, which terminated in gangrene of the lung; it was a severe case, in which I aspirated the lung, then enlarged the opening and practiced external drainage between the ribs. The rib was not resected, and I believe that in many of the cases free drainage may be obtained, without removing a portion of the rib, by making an opening in the inter-costal space and inserting a drainage tube.

Dr. W. O. Roberts: I also wish to congratulate Dr. Rodman; certainly he carried out the proper procedure. The patient was in a very critical condition, and the Doctor is deserving of great credit.

Dr. T. S. Bullock (visiting): I have seen with Dr. Anderson two cases similar to the one under discussion, where recovery followed very promptly. In the first case, after aspirating, a drainage tube was passed through the inter-costal space and thorough drainage established in that way. In the other case he did a resection of the rib and recovery followed promptly. I must say that I never saw such an amount of pus escape from any cavity as was discharged in the last case.

Dr. Jas. S. Chenoweth: I was present when Dr. Rodman operated upon the case referred to. While the patient did spit up a large quantity of very offensive stuff, I was particularly struck with the small amount of pus liberated at the operation. I was rather impressed that there might possibly be a collection of pus which was not reached; however the patient was very promptly relieved, and it is evident all the pus was removed. I was struck with the small amount of pus, and the very grave symptoms.

Dr. J. G. Cecil: I want to ask one question in reference to puncture of the lung by a fractured rib. As I understood the reporter, it was evident from the beginning, from the symptoms already detailed, that the rib had been fractured, and that it had wounded the lung. Would it not have been good surgery therefore to have made an incision in the region of the fracture as soon as the man recovered from the shock of the accident, and searched for the rib which probably projected into the lung? It occurs to me that this would be good surgery, and might have prevented after trouble, such as Dr. Rodman has described.

Dr. W. L. Rodman: I am glad Dr. Cecil has brought up the question of early operation in these cases, and the point he makes is an excellent one. I was tempted to make an opening in this case the second day after the injury. I went over all the literature of the subject very carefully, and could find nothing to warrant me in such a course. The books simply state, "In case of depressed ribs, where you are satisfied the lung has been injured, the proper procedure is to take a blunt hook and go down into the rib and aim to pull it up in that way." I did not believe any good would come from such a procedure, so did not attempt it. The next case of the kind I have I shall not hesitate to do as Dr. Cecil suggests; certainly it is the proper procedure in such cases, and there is no danger in removing a piece of the rib, when it is already, as in this case, a compound fracture, air entering from within. In

regard to the point made by Dr. Anderson: I am perfectly familiar with the fact that the larger majority of medical writers say that we do not have traumatic pneumonia. I do not mean to say that in these cases we have the pneumococcus, but I do say that this man's lung was solid from apex to base. Another man hurt the same day, who is still in the ward, had the same kind of injury, although he has not had emphysema and the lung did not become gangrenous, but it was solid from top to bottom—evidently a septic pneumonia. I am thoroughly convinced that any man examining the two patients would have pronounced one lung of each perfectly solid from top to bottom; whether it was pneumonia or not, you can decide for yourselves—each had the rust-colored sputum, the characteristic respiration, pulse and temperature of pneumonia, and neither at any time had any fluid in the pleural cavity. The onset was by a chill, and the termination sudden, as usually seen in croupous pneumonia, manifested by sudden dropping of temperature, free action from skin, kidneys, etc.

Dr. W. O. Roberts: It is not unusual to have an injury of the lung and fracture of the rib without an abscess. Dr. Chenoweth will remember a case that we exhibited before the class at the University not long ago, where the man had a fracture of the second rib with emphysema. The man recovered without the slightest trouble and without operation. I do not think it advisable to do this operation in fracture of the rib until there is evidence of suppuration.

Dr. W. L. Rodman: If you knew there was a penetrating wound of the lung, do you not think it would be good surgery to operate at once?

Dr. W. O. Roberts: Just as soon as there was evidence of suppuration, then operation should be performed—not before.

URETHRITIS—SIMPLE AND SPECIFIC.

Dr. I. N. Bloom: I have recently had two or three cases which have furnished considerable food for reflection. They were all cases of urethritis. It is now a generally accepted fact among those who are supposed to know, that urethritis is divided into three classes: 1st, traumatic urethritis; 2nd, urethritis simplex; 3rd, urethritis specific. A man having gonorrhoea is subjected to specific urethritis, which is brought about by the specific germ—the gonococcus of Neisser—carried from one subject to another, and by its development produces the disease. While there have been some differences of opinion in regard to the causation of gonorrhoea, the above is the most generally accepted theory. I am not prepared to dispute this, but two cases I wish to report have at least been food for reflection for me for some time, and I propose to give the cases first, then draw my deductions therefrom, or leave the members of the Society to draw theirs. The first case came under my observation about a year and a half ago. A man who had been married about ten years contracted gonorrhoea—at least gonorrhoea was the diagnosis given by his physician. The following are the particulars: The man had been on a spree and had indulged in one sexual intercourse away from his wife. Two or three days after this, having no symptoms of any kind, he had connection with his wife. About a day following this coitus, he noticed a slight discharge from his penis and consulted me. The flow when I saw it was mucoid, scarcely mucopurulent in character, about the color and consistency of glycerine. Urination on the part of the patient was painless, and there was little or no inflammation around the meatus. At the end of four or five days of ordinary treatment there was no discharge at all from the penis or in the urine; in the meantime, however, for one or two days the flow became more purulent in character, but principally mucoid, and remained that way until probably the end of five days, when it ceased altogether. He had not practiced coitus with his wife from the time he first consulted me, and she subsequently developed undoubted gonorrhoea, which lasted four or five weeks, severe in character, with urethritis, vaginitis and pelvic peritonitis, characterized by the usual symptoms and usual amount of severe pain. Previous to the time this man first consulted me, he had had no signs of gonorrhoea for ten years. The other case

—rather there are two of them which are practically alike, one of which I followed very closely, having had a microscopical examination of the discharge made by Dr. Vissman—occurred in a young man, twenty-six years of age, who came to me about a year and a half ago for a syphilitic affection which was then about two years old. About the same time he told me of a gonorrhoeal discharge he had which came on at intervals; sometimes for a week or two it would remain quiet, then become varied in form from a thin, gleety mucous discharge to (at times) a decidedly purulent flow. In the course of treatment for syphilis, I saw the patient quite frequently, and he paid little or no attention to this discharge; in fact the urethral discharge was only mentioned occasionally and received no direct or thorough treatment. The patient seemed disinclined to it, would not use injections nor internal medicines faithfully, and would not limit his desires or the gratification of them. In June the man fell in love and began to think seriously of marriage. In the meantime three years had elapsed since the development of syphilitic manifestations, to which he had attended fairly faithfully as a man can do, by getting a month's supply of medicine and taking it regularly. His gonorrhoea, from his failure to give the treatment of it proper attention, had become chronic. About the last of July, when he consulted me as to the possibility of marriage, I told him that so far as syphilis was concerned there was no reason why he should not marry, but so long as there was the slightest discharge from the urethra, this feature would debar his union. Proper treatment was then instituted, and carried out rather more earnestly by the patient. In August there was some improvement and he was still more anxious to get married. I suggested to him the advisability of having a microscopical examination made, and he was accordingly sent to Dr. Vissman, with instructions to take a sample of urethral discharge when he had not cleaned out the urethra for several hours, so that the discharge could be examined. This was done, and at my request Dr. Vissman made a very careful examination, and made the following report—that while there was possibly very little danger, a few gonococci were still present, and he did not think immediate marriage was advisable as he did not consider it safe to take the risk. We then worked even more vigorously in the matter of treatment, and by the middle of September for a week or ten days there had been no discharge. The treatment was continued, and at the end of September there was still no flow. By the first of October almost a month had elapsed without the slightest sign of gonorrhoea; the mucous shreds had disappeared from his urine as thoroughly as they ever disappear in any one who has had gonorrhoea within five years. By a most careful examination the faintest traces of mucous shreds could be seen in the urine, but there was not the slightest evidence of discharge from the urethra, and there was nothing to examine under the microscope. I then gave it as my opinion that there was very little danger from his marrying; he was apparently in the best of health; he had been examined repeatedly for stricture, which so often follows gonorrhoea, but nothing of this kind could be found, and there was no trace of the previous chronic gonorrhoeal infection. The man married early in October, and (of course) pursued the usual course in those cases. November passed, and late in December he came to me stating that his wife had been complaining, and told me the nature of her symptoms. He said that she had only been complaining for a few days. He very wisely thought an examination should be made at once, and for this purpose his wife was brought to my office. Upon examination I found that she was suffering from undoubted gonorrhoea; she had urethritis, vaginitis, and considerable pain in one side, with slight pelvic peritonitis. She has been under treatment since that time; she still has vaginitis, but no urethritis, and the urine has become normal. There are still some evidences of pelvic trouble in the left side. I cite these two cases for the following purposes: In the first place, we have been taught that specific urethritis runs a certain course. It has probably not been the experience of any one here to take a case of undoubted

specific (so-called) gonorrhoea, such as was present in the first case, and cure it in four or five days. I remember once of having a case where I thought I was producing a remarkable result in curing a gonorrhoeal discharge in eleven days with resorcin. With that exception I can remember no case of specific gonorrhoea that was cured inside of three to four weeks. Now, that being the case, the question is did this man (unfortunately we did not have the secretions examined), have a specific gonorrhoea? If so then it was cured in four or five days by remedies that have not been certain to affect a cure heretofore inside of twenty-eight days. If he did not have specific gonorrhoea how could he have given his wife gonorrhoea? It is fair to assume that this man has had intercourse with his wife quite a number of times since she has gotten better, and he has not developed any form of gonorrhoea. In the second case, the man had no discharge whatsoever from the urethra for several months previous to marriage, and has had none up to this time, and yet his wife developed an undoubted case of gonorrhoea so far as all symptoms are concerned, because there is no form of simple vaginitis which will result in urethritis and pelvic peritonitis. I never had this woman's secretions microscopically examined.

DISCUSSION.

Dr. H. H. Grant: I do not speak of these cases from a specialist's standpoint, but it occurs to me that both cases Dr. Bloom describes may be easily explained. In the first case, I believe that his patient most certainly had simple urethritis, and it is entirely possible for simple urethritis to have produced this irritation in the woman. I am sure that I have seen a number of cases of urethritis which were simple in the male, certainly cases in which there were no gonococci present, perhaps in many instances there was certain irritation, the result of old strictures, producing long standing trouble that infected the wife afterward; and while I believe, as Dr. Bloom states, that it is not possible to bring about a cure of gonorrhoea in four or five days, yet I do think it possible for simple urethritis to get well in that length of time to all appearances, and yet afterward may cause vaginitis, urethritis, etc., in the female. Referring to his second case: A great many cases of gonorrhoea are supposed to be cured, while there still remains in the glands far back in the prostatic portion of the urethra a quantity of the gonococci which are not in active irritative and aggressive condition; yet they are present and may become dislodged, and pass out with the urine or with the semen in sexual intercourse, and in the latter case they are ejected into the female vagina and may be productive of serious trouble. I think there is almost no question about this being the course of infection in the second case reported by Dr. Bloom, and I can see no other rational explanation of the first one. I am sure Dr. Bloom will say without hesitation that a very large number of cases of gonorrhoea are apparently cured, still there may be retained somewhere, either in the epithelial covering of the urethra or in some of the glands or pockets far back, germs able to cause gonorrhoea, for a very considerable length of time, even after all manifestations have apparently been cured, and this too without there being any particular irritation in the male, or at least any irritation that he is able to define as result of the urethritis. Certain symptoms are nearly always present in individuals who have suffered long from gonorrhoea, which remain for a considerable period of time, certainly for a year or more after apparent recovery; the patient feels a sense of discomfort in the prostatic portion of the urethra almost invariably, and sometimes even higher up there is that condition known as gonocystitis. It is exceedingly common for conditions of this kind to exist long after the original trouble has disappeared.

Dr. J. G. Cecil: The cases reported by Dr. Bloom are very interesting to me. Certainly we know it to be a fact that gonorrhoea may exist for a long time in the genital passages of women, in the glands of Bartholini, in the cervix, in the posterior vaginal fornix and in many places almost inaccessible, which generally are over-looked

or neglected in any method of treatment that is adopted. The question as to how long gonorrhoea may exist either in the male or female, and how long it may possibly be communicated is one to which I have never been able to give any satisfactory answer, and shall be very glad if Dr. Bloom in closing will enlighten us in this particular. I can hardly agree with Dr. Grant that simple vaginitis will show up in as virulent a form as indicated in the case reported by Dr. Bloom. We may have simple vaginitis occasionally, but I have never seen it involve the urethra to any extent. I have seldom seen it extend to the pelvic region and involve the tubes; in fact, I hardly think it is probable that simple vaginitis will ever result in these complications. I am free to say that I cannot understand how the first case described by Dr. Bloom could have originated. The second case, especially in its relation to the time when it is advisable for persons to marry after having had gonorrhoea, strikes me as being one of very great moment, because of the prevalence of gonorrhoea among young men, and especially since we know the wonderful number of diseases in the female that result from so-called cured gonorrhoea. I had a case in mind at the time Dr. Bloom was speaking, of a gentleman whose wife had been suffering from some womb trouble, who had of necessity to live apart from his wife, and had indulged his fancy outside, contracting gonorrhoea. He came to me for treatment while his wife was going to another physician for treatment. I persisted with and urged upon him the necessity of complete cure before he again went to stay with his wife, and thought that I had accomplished this and he thought so too. Every symptom had disappeared, and he went so far as to make a crucial test by going outside again and trying it on somebody else, and utterly failed in his attempt to communicate the disease. Three or four weeks after all symptoms had subsided he communicated gonorrhoea to his wife. It is a question that it seems to me ought to be settled in some definite way, if possible, because of its importance. Of course, no man wants to communicate gonorrhoea to his wife, whether she be newly married or otherwise, and especially since we know that so many pelvic diseases which require extensive operative procedure to relieve are due to gonorrhoea, it seems to me the question ought to be discussed and settled. I am sorry that I have not something definite to offer, but it seems to me that Dr. Bloom, in the cases he reports, did follow out every possible precaution that even the most exacting of us could have asked, and yet his cases went wrong. The question will come up to all of us, When can a man marry after he has had gonorrhoea with safety? When should he be allowed to marry? The question becomes one of the greatest gravity, and should receive our careful consideration.

Dr. I. N. Bloom: I feel very much gratified that the cases I mentioned have been so thoroughly and ably discussed. My object in citing these two cases was to get the different opinions on the subject. I am fully cognizant of the experiments and tests that have been made as to the cause of gonorrhoea, and as yet I am not satisfied and not prepared to state that the germ of Neisser is not the specific germ of gonorrhoea; on the other hand, I am also not prepared to state positively that it is the essential germ which produces gonorrhoea. As regards the first case: Dr. Cecil has answered Dr. Grant exactly as I should have done. I do not believe simple urethritis could possibly produce the symptoms which were seen by one of the physicians present, who was called in consultation when peritonitis developed. In the second case, the man married early in October, and had intercourse with his wife during October, November and a part of December before she developed any symptoms of gonorrhoea, and the strangest feature is, without a single symptom developing in himself. It is natural to suppose any latent urethritis that might exist would be aggravated by sexual congress the first few weeks of marriage, and be at once communicated; I believe that is the usual history of these cases. However, in this nothing developed in the wife until fully two months after marriage. Some writers claim

that a man may be absolutely free from all symptoms for a year, and then communicate gonorrhoea; while such cases may sometimes occur, I believe they are extremely rare. Further, do not some authorities recommend marriage for the cure of so-called gleet discharges in the male, and have not cures resulted in some cases, without any trouble developing subsequently in the female? Yet here is a case where exactly the opposite condition exists: there was absolutely no sign of urethral discharge for a period of several weeks before marriage, all evidences of gonorrhoea having disappeared, yet the wife became infected. We could all cite cases where a discharge was still present, the patient married, became well, and the wife was not infected. I do not believe that the gonococci can exist in any part of the urethra for a long time sufficiently active to give a specific gonorrhoea to any one, without causing trouble, and specific trouble at that, in the patient himself. Furthermore, if they did exist in the urethra, I believe evidences of their presence could be detected in the urine. If they existed and remained in the urethra, they could not be active, and could not be made to be active, and in order to be conducted with the semen, and not to flow from the urethra, they would have to be present in some quantity, and serious inflammation would be likely to result therefrom. I am satisfied the cases I have reported might be multiplied by many others, and, because of the importance of the subject, I think they are worthy of discussion and publication. In regard to the specificity of the bacillus of Neisser, I do not think it has been fully established, clinically at least.

Dr. Bodine: (Visiting.) I understood Dr. Bloom to say that his patient had at one time what was regarded as specific urethritis, that the gonococci were present. Is it not possible that some of these gonococci invaded the ejaculatory ducts, during the progress of the urethritis and there remained quietly, producing absolutely no trouble? By treatment, may we not destroy all the gonococci in the urethral tract, but may not some of them during the active stage get into the ejaculatory ducts and remain there? No examination of the urine in such a case, no matter how frequently repeated, would disclose their presence, but during the ejaculation of semen in sexual intercourse they might be transmitted to the female. I can understand how this might occur, and simply offer this suggestion as a possible explanation of the infection in the case reported by Dr. Bloom.

Dr. I. N. Bloom: The tendency of the gonococci is to increase and multiply, and I believe all experiments in this direction show that they never lie in a latent quiet condition, but are continually developing.

Dr. H. H. Grant: I agree perfectly with what Dr. Bodine has said, and simply rise to answer Dr. Cecil: In the present history of diseases of women, am I not correct in saying that there are certain authorities who maintain that no woman ever marries a man who has had gonorrhoea but suffers in some way from the effect of that gonorrhoea? There is abundant authority in every surgical journal of the land, and in nearly every surgical book to support the statement I made that gonorrhoea is not by any means cured when the discharge ceases, and that in many instances the disease remains latent for a very considerable time. Therefore if it be true, as maintained, that any woman who marries a man who has had gonorrhoea invariably suffers from its effects, it would seem to me that if a man marries a woman within a period of two or three years after he has apparently recovered from an attack of gonorrhoea, it is perfectly possible for the gonococci to produce such effects as Dr. Bloom has described. The question as to when it is safe for a man to marry after having apparently recovered from an attack of gonorrhoea is one of the greatest importance, and one which in my opinion is far from being satisfactorily settled.

—Dr. Dana prescribes five drop doses every three hours, of thujia occidentalis for cystitis. He says the severest case is relieved in a very short time.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M. D., Fellow of the Academy of Medicine, New York.

Phosphaturic Albuminuria.—At a meeting of the Paris Biological Society, Dr. Robin read a paper showing that so-called cyclical albuminuria with neurasthenia, is frequently due to a general disturbance of nutrition and, in particular, to a loss of the mineral elements. The arthritic diathesis, nervous over-exertion, and over-feeding are amongst its most frequent causes. The disease is characterized by an exaggerated denutrition, which is most apparent in the organs that are normally rich in phosphorus, and by an incomplete assimilation of alimentary phosphates. There is a loss of phosphoric acid, as shown by urinary analysis, while the red blood corpuscles show an evident malnutrition, and the processes of oxidation are relatively diminished. The essential urinary symptom consists in the presence of albumen with phosphaturia. The author divides this class of cases into four varieties, all of which, however, should be considered as requiring the same general principles of treatment, which may be briefly said to consist in those measures which tend to lessen the disintegration of phosphates from the tissues, to improve their assimilation, and to increase oxidation. The other indications are to improve the condition of the blood and to combat the albuminuria by the usual means.

Vesication for the Vomiting of Pregnancy.—A writer in the *Lancet* says: "I have not failed once for many years by a single vesication over the fourth and fifth dorsal vertebrae, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritus pudendi of the puerperal condition yielded as readily, and to one application."

How to Arrest a Boil, Carbuncle or Malignant Pustule.—Dr. P. C. Barker writes to the *Medical Summary* that he has used the following procedure for several years, with unvarying success. Take a large hypodermic syringe, holding, say, half an ounce, fitted with a small needle. Fill it with a 1 to 500 solution of mercuric chloride, insert the needle into one of the peripheral openings, in case it is a carbuncle, and wash out the little cavity. Then direct the needle towards and into the surrounding induration and force a little of the solution into it. Treat every opening and its corresponding peripheral circumference in the same manner, carefully washing out the necrosed connective and other tissues that have become separated. Repeat this daily with the solution, gradually reduced to one-half the original strength, until all induration has disappeared and granulations have begun to appear. If the first injection be thoroughly performed, the spread of the carbuncle will be arrested at once, and there will be no more pain. Washing out the little cavities is painless, but the injection into the indurated tissues is not free from pain. The same treatment is applicable to the little furuncles that invade the meatus auditorius externus, and the inner surface of the ala nasi.

To Abort Syphilis.—Bichloride of mercury (10 grs. to 3j) painted on a chancre as soon as it appears, kills all specific germs, and there will be no systematic manifestation. Then you only have a local sore to heal. So says the *Medical Summary*.

Comparative Influence of Large and Small Doses of Iron.—The comparative effects of large and small doses of iron, and the indications for the one or the other are discussed in the *Therapeutic Gazette*. The experience of the writer in treating twelve cases of anemia, which were as far as possible alike, confirmed his belief in the small doses. Six of these people received two or three grains of reduced iron three times a day, and the remaining six

received one-third of a grain three times daily. The six who received the small doses had far less disorder of digestion than those who received the large doses. They recovered as promptly as those receiving the large doses, if not more so. It is true that in some conditions in which there is gastro-intestinal disorder, associated with the formation of gas arising from fermentation or decomposition, and in which the anemia is largely due to the destruction of the constituents of the blood by the absorption of poisonous materials from the intestine, large doses of iron are absolutely necessary, because in these instances only a small quantity of iron is absorbed, and the greater amount of it forms a sulphide of iron or other compound, with the contents of the intestine. Where we have, therefore, a destruction of the iron in large amount, it may be necessary to give it in full dose; but unless this is the case, one-eighth of a grain of reduced iron will, in most cases, give better results than three grains. Under these circumstances constipation more rarely occurs, and we also avoid in this way the so-called iron headache.

Treatment of Typhoid with Large Quantities of Water.—Maillart (*Rev. de Méd.*, Paris, March 10) maintains that the treatment of typhoid by the ingestion of large quantities of water is worthy of recognition. The patient should receive from five to six quarts of water daily, during the febrile period. The results consist in a progressive subsidence of the febrile process, a disappearance of the dryness of the tongue, and a marked sedative influence upon the nervous, circulatory, and renal phenomena, probably owing to the oxidation, solution, and elimination of the toxins produced in the progress of the disease, and also of the dejecta. This mode of treatment has no noteworthy influence upon the course, the duration, or the evolution of the disease, is not attended with unpleasant complications, and is easy of application.

New Treatment of Sea-sickness.—Dr. W. N. Skinner, who has had much experience as a surgeon on transatlantic steamers, says (*N. Y. Med. Journal*, Dec. 9, 16, 23 and 30, 1893), that after having studied the symptoms of naupathia in their completeness, he is convinced that they are due, above all, to the lowering of the blood pressure, and that this lowering depends upon a paresis of the centres of innervation of the heart and arteries. To counteract this he uses a solution of atropine and strychnine hypodermically. The following is the formula which he most frequently employs:

R Atropin. sulph., 0.02 gramme.
Strychnin. sulph., 0.04 gramme.
Aq. menth. pip., 40 grammes.
Ft. sol.

One gramme of this solution contains half a milligramme of atropine and one milligramme of strychnine, which he considers the adult dose. If in the space of two hours after the first injection the patient be not cured, he gives a second, and possibly a third two hours later. It is not prudent to exceed this amount per day. The effects are often surprising. In the majority of cases the vomiting ceases at once, and soon afterwards no more nausea, cephalalgia, or distress is felt.

Cocaine in Hemophilia.—Von Mantueffel (*D. Med. Woch.*). Dorpat reports the successful treatment of a severe case of prolonged bleeding following the extraction of a molar tooth of a boy, aged twelve years. After two days of unsuccessful treatment by various devices and drugs, it was determined to use a Paquelin cautery. A preliminary injection of cocaine at three places in the gum about the site of the extracted tooth, caused the bleeding to immediately stop. The injection had to be repeated, however, at intervals of five or six hours for some time before the bleeding was permanently controlled.

Strychnine as a Cardiac and Respiratory Tonic.—In the *Therapeutic Gazette*, No. 2, p. 75, 1894, Dr. W. H. Washburn reports a case in which a patient had swallowed intentionally two ounces of chloroform, and after the pupils had ceased to contract, and respiration and circulation had become extremely feeble, a subcutaneous in-

jection of one-twentieth of a grain of strychnine was given, followed by artificial respiration. In one hour another injection of one-sixtieth of a grain of strychnine was given, and complete recovery followed.

The same writer alludes to another case of chloroform anesthesia, followed by extreme pallor and scarcely a perceptible pulse, in which speedy recovery followed a hypodermic injection of one-twentieth of a grain of strychnine.

According to Dr. N. S. Davis, clinical observation and direct experiments by several therapeutic investigators have fairly demonstrated the direct antagonistic effects of strychnine and anesthesia as produced by chloroform, ether, or alcohol.

And if physicians and surgeons, in all cases of dangerous depression of respiratory and cardiac action, whether from anesthetics or other causes, would promptly and judiciously resort to the use of strychnine, aided by artificial respiration, and wholly avoid the common resort to hypodermic injections of ether or alcohol, and enemas of whiskey or brandy, many lives would be saved that would otherwise be lost.

Chrysarobin in Psoriasis.—The London correspondent of the *Bulletin of Pharmacy* says: The dirty, unpleasant character of chrysarobin ointment is well known. The extent to which it stains the clothes frequently causes the patient to object to a thorough treatment with the medicament in psoriasis. Dr. Dale James finds that chrysarobin can be applied with more cleanliness by dissolving one part chrysarobin in seven parts of chloroform, and stirring about an equal quantity of soft petroleum into the mass. The preparation is applied to the psoriatic area with a brush.

Digitalis in Goitre.—Dr. Meusel (*Sém. Méd.*) regards the most efficacious medical treatment of goitre as consisting in the internal administration of digitalis, and local application of a salve of the iodide of potash to the growth. Under the influence of this treatment he has caused goitres to diminish in size, and even to disappear with astonishing rapidity, which had resisted treatment by the iodides, both internally and externally. The favorable action of digitalis in hypertrophy of the thyroid is explainable by its influence on arterial tension. This employment of digitalis is far from being new, for Dr. Murray, in 1776, used it for this affection.

Pilocarpine in Pneumonia.—Dr. C. Sziklai (*Wien. Med. Presse*). The two most important results—no mortality and a decided shortening of the inflammation—are claimed by the author for his treatment of pneumonia with pilocarpine.

It is maintained that if a patient has a strong chill and a temperature above 39° C. (102° F.), with lancinating pleuritic pains and interrupted respiration, rolls about in his bed restlessly and anxiously, and has for several days been depressed, without appetite and subfebrile, we may be prepared for the outbreak of pneumonia, and diagnose the case as such. If we now prescribe, in the usual ipecac infusion, antipyrine and pilocarpine, it will be found after 12-24 hours that the patient has become quiet, breathes easily, has no more pain in his chest, and is quite comfortable. The danger of engorgement has passed away, if he be entirely free from fever. If there should be a rise of temperature up to 38° C. (100° F.), a repetition of the mixture will suffice, it is claimed, to bring on recovery, on the third day after the beginning of the affliction (dating from the chill). The patient will be out of bed and enjoying appetite on the fourth day, and able to work on the fifth.

In an advanced stage of the disease, pilocarpine, it is asserted, will (in contrast to the usual treatments) in 24 hours effect the lysis; the fever will have receded, respiration will be free, expectoration easy, and the sputum without bloody admixture. Convalescence will have begun.

The author states that there has been no exception in more than forty cases observed by him; all of these recovered promptly.

Notes on Diagnosis.—(Translated from the French, German and Spanish Journals, by F. H. Pritchard, M. D.)—

DIAGNOSIS OF CANCER OF THE LIVER.—Dr. Hanot, of Paris, in a recent clinical lecture on primary cancer of the liver, claims that diagnosis is easy. Though the tumor is generally painless, it may be associated with pain, there may be either slight or severe icterus, but the decisive feature is the development of a rapidly growing tumor in the hypochondrium, with a galloping cachexia. The enlarging organ displaces the heart, and compresses the other organs, giving rise to dyspnoea, palpitation of the heart, oedema of the lower extremities, with albuminous urine. Hence, it resembles a heart affection, in its terminal stage. Yet the liver in a heart disease is never as large as in well developed cancer, and the rapid progress of the symptoms is not observed. Then, again, more time is required to cause the liver to enlarge, in a heart disease, without an accompanying murmur. If they coexist, the rapid hepatic growth will lead one to recognition of the presence of cancer. In cancer, the amount of urea in the urine is considerably diminished, and there is a distinct leucocytosis in the blood. Yet there has been observed a form of hepatic carcinoma which was smooth and apparently fluctuating, thus simulating a hydatid cyst. In this latter condition a trial puncture with a hypodermic syringe, provided with a long needle, will soon determine. It may also be confused with abscess of the liver when it is especially rapid in its growth. In cancer the three cardinal symptoms are: a tumor in which growth can be almost followed by the eye, a galloping cachexia and a typical physiognomy. The face and appearance of the patient strike one with their indifference, immobility, and sort of fatalistic abandon.—*La Semaine Médicale*, No. 64, 1893.

DIAGNOSIS OF STREPTOCOCCIC PNEUMONIA.—Dr. A. Wassermann, of Berlin, in a study of pneumonia of streptococcic origin, states that when it pursues a sub-acute course it greatly resembles tuberculosis in its general features. Indeed, many such patients are diagnosed as tuberculous. There is a distinct infiltration of the apex, a slow course, a very slight expectoration, and an absence of tubercle bacilli in the sputa. Tuberculin injections are not followed by a reaction. The general symptoms are about the same as in pulmonary tuberculosis, the patients are emaciated, the expectoration being often absent or but slight; examination of the sputa for bacilli is sometimes impossible. The physical symptoms, rales, etc., are not constant, but are liable to wander from one part of the lung to the other, disappearing from one part and reappearing in another; an actual "erysipelas of the lung." The temperature may suddenly rise and continue for several days, with intermissions. Often the patients will bear quite an elevated temperature without complaint.—*Deutsche medizinische Wochenschrift*, No. 47, 1893.

DIAGNOSIS OF HABITUAL HEADACHES OF NASAL ORIGIN.—Dr. J. Scheinmann, of Berlin, claims that habitual headache very frequently is of nasal origin. Even in neurasthenia and hysteria he says that headache may be only due to some local nasal affection, and not be a single symptom of the total symptom complex. Grave diseases of the nasal cavities and their appendages may exist for a long time without the patient noticing them, while his headache is terrific, and only by the nasal symptoms becoming more distinct is the attention of the physician called to the true source. Neurasthenics are more easily affected than healthy subjects by these nasal irritations; often their headache is of local origin, and they will be frequently relieved by appropriate local treatment. Most patients with swelling of the mucous membrane of the turbinated bones suffer from more or less headache, and hence, where no known cause can be discovered in a case of headache he advises examination of the nose, in hysterics and neurasthenics as well. Polypi are also a cause. The pain originates at the root of the nose, and radiates into the eye or the temple, or there is a constant dull pressure over the root of the nose, which often is associated with dull headache. Especially in cases of catarrh, with hypertrophy of the mucous membrane of the turbinated bones, is there a

distinct listlessness, and inability or loss of desire for mental exertion. Empyema of the maxillary is often accompanied by headache on the corresponding side, and at the root of the nose. There is a constant sensation of pressure at the root of the nose, and often severe neuralgic pains in the frontal region.—*Berliner klinische Wochenschrift*, No. 49, 1893.

DIAGNOSIS OF THE DIFFERENT FORMS OF MENINGITIS.—Prof. Eulenburg, of Berlin, in an article on the most important affections of the brain and their differential diagnosis, presents the differential diagnosis of the various forms of meningitis:

Internal Hemorrhagic Meningitis.—This disease attacks preferably individuals of an advanced age—over fifty—and particularly those with mental diseases, organic lesions, and general marasmus. It is also observed in alcoholics, and in acute infectious diseases, as small pox, typhoid fever, scarlet fever and rheumatism, as well as after traumatism. The symptoms are either due to the development of the hemorrhagic membranes, or to the consequent cerebral atrophy. Vehement and persistent headache, either all over the head or limited to a certain region. It may appear as an apoplectic attack, or there may be restlessness, gradually increasing, vertigo, delirium, congestion, acceleration of the pulse, etc., with the development of a more or less profound sopor. In this comatose state there appear certain special irritative phenomena: contractures, muscular tension, epileptic attacks and contraction of the pupils. There is an increase of temperature, which will distinguish it from apoplexy. The coma is often interrupted by intervals either partially or totally free. Sometimes there is general or unilateral compression of the brain. Death usually occurs after several intervals of improvement and aggravation.

Acute Meningitis.—Sometimes of primary, though most generally of secondary origin, from extension of inflammation in neighboring organs, as in otitis media or in pneumonia. It begins usually tumultuously, with a rigor, considerable fever, headache, nausea and vomiting, vertigo, until the patient takes to his bed, hyperesthesia, restlessness, delirium, somnolence and mental disturbance, which continually increases. At the beginning, it is easily confounded with infectious diseases accompanied by violent headache, as typhoid fever, scarlatina or small pox, etc. The temperature curve and the exanthem will soon decide. If developing during a pneumonia, in infancy, the frequent vomiting and convulsions will suffice to diagnose. There are both tonic and clonic spasms, which may be limited to one side of the body or be general, trismus, rigidity of the nuchal muscles, strabismus, conjugate deviation of the eyes, or even actual tetanus. The pupils are first contracted, and later dilated widely and without reaction. In infants, the fontanelles are tense and distended—an important diagnostic sign. Death sets in with increased fever, respiration, pulse and coma. This course, with the intense fever, distinguishes it from eclamptic convulsions in children and uremic convulsions in adults.

Tuberculous Meningitis.—Generally follows as a secondary, after previous involvement of some other organ, as the lung, kidney, intestine, spleen, bronchial glands, etc. Prodromic signs are rarely observed. It usually begins with headache and frequent vomiting. Three periods are observed: the initial, with fever, increased pulse beat, and general hyperesthesia to touch and of all the senses. Vomiting, without digestive disturbances and immediate complication, with fever and other cerebral symptoms, as irregular respiration, should lead one to suspect tuberculous meningitis. When the patient passes into the second period, after two to eight days, the diagnosis is easier. The pulse is slower, irregular, while the fever remains about the same as before, there are alternating periods of stupor and irritation, with headache, vomiting, convulsions, and crying out during sleep. The apathy and stupor increase, the hyperesthesia changes to weakness and sensory torpor, with spasms and tonic contractures. The pupils gradually dilate, the reflexes diminish, respiration becomes slow and irregular, the abdomen presents the so called navicular

depression, and the bowels refuse to respond, even to drastic cathartics. In the third period the pulse become irregular and terrifically rapid—200 pulsations and over—is small and imperceptible, while the heart seems to run onwards towards death—incipient paralysis of the pneumogastric. The progressive general paralysis, the complete lack of reaction in the completely dilated pupils, the profound coma, the appearance of general convulsions, alternating with local spasms, Cheyne-Stoke's respiration, generally very pronounced, the descent of temperature below the normal, and its enormous ascent shortly before death, form a characteristic picture. This latter period is very short. In adults it is less defined, the whole course of the disease is more irregular, sometimes developing in a few days, in others running a prolonged course. Nearly always latent at first, and later resembling a mental affection, as dementia paralytica, etc., with confusion of ideas, maniacal delirium, combined with disturbances of speech and apoplectic or epileptiform attacks. Yet, in general, the diagnosis may be made from the presence of tuberculosis in other organs, and the lungs in particular, and from the retarded pulse rate, depression of the abdomen, the condition of the pupils, and in many cases the state of the temperature and respiration.

Epidemic Cerebro-Spinal Meningitis.—This form affects chiefly children under ten years, and adults who are debilitated by fatigue or privations, or who live in closely crowded or badly ventilated dwellings. Slight prodromal symptoms, lasting one or more days, as languidness, general malaise, may precede, or the disease may appear suddenly, with rigors, intense fever, vehement headache, especially in the forehead, vomiting and stiffness of the neck muscles. This latter symptom, though not pathognomic, is quite prone to appear early. At the same time there is intense hyperesthesia of the cutaneous nerves and those of special senses, and often irritative phenomena in the various regions of cerebral and spinal innervation; clonic and tonic convulsions of the facial muscles, trismus, spasms of the eye muscles, nystagmus, strabismus, opisthotonos, muscular tension and convulsions of the extremities, and in very young children, general convulsions. The irritability of the mind is increased; restlessness, insomnia and delirium. In the second portion of the first week labial herpes—pathognomic—develops, and may be accompanied by eruptions in other portions of the body. Other irregular and papulous, macular or vesicular eruptions may appear later, and simulate those of typhoid fever, scarlatina or small-pox. These eruptions may be so extensive as to render diagnosis difficult, but the premature appearance of labial herpes, with the presence of intense rigidity of the neck, hyperesthesia and symptoms of motor irritation will decide. In meningitis of the convexity or in the tuberculous variety, in children, there is rigidity of the neck, but it is less persistent and intense, and though combined with fever and general cephalic symptoms, yet the herpetiform and other eruptions are lacking and it does not appear either endemically or epidemically, there are signs of tuberculosis in other organs, and the tuberculous form is divided into periods, with irregular and slow pulse in the second. Labial herpes may also be observed in pneumonia. The further course of epidemic cerebro-spinal meningitis is variable. In grave cases, with persistence of the high fever, there develops a typhoid state, with prostration, dryness of the tongue, enlargement of the spleen, roseola, great depression of body and mind, motor and sensory paralysis, sopor and coma. When the case ends fatally, symptoms similar to those of basilar tuberculous meningitis may appear; acceleration of the pulse, Cheyne-Stoke's respiration, preagonic ascent of temperature, etc. In other cases the symptoms of sensory depression and even coma, yet with alternating periods of irritation and depression, with oscillations of temperature and its gradual remission; convalescence may begin, during which there is also great danger of relapses and complications. In this period it is to be differentiated from other febrile affections, as typhoid fever and non-epidemic meningitis, by the symptoms mentioned, and especially the participation of the spinal cord, the appearance of signs of

sensory or motor spinal paralysis, as well as by involvement of the cranial nerves.—*Revista de Ciencias Médicas de Barcelona*, No. 19, 1893.

DIAGNOSIS OF TUBERCULOUS CYSTITIS.—Dr. A. Boursier begins by stating that its diagnosis is by no means easy. The presence of the bacillus can only be hoped for when there are ulcerations of the mucous membrane. Frequent desire to micturate is observed, which is greater at night than during the day, while in simple and calculous cystitis, rest greatly relieves, and with stone in the bladder it may entirely disappear on lying down, and increase with exercise and walking. Prostatics also suffer from an increased desire to urinate at night, but they are usually in an advanced age, when vesical tuberculosis is rare. Especially in women frequent micturition may be dependent only on nervous causes. Pain is felt on micturition, but it is most severe afterwards. Walking does not influence it much, but during the night it may become continuous and exaggerated. In gonorrhœic cystitis the pain is not noticed during the intervals, except in very acute cases. It may be quieted with opiates, which is impossible in tuberculous cystitis. Morphine will produce some effect, yet it is necessary to increase the dose daily. In patients with cystitis from stone in the bladder, the pain is not remarked during rest. It is here observed after walking or riding in a buggy with poor springs. It appears towards the end of micturition, when the last few drops of urine have been expelled and the bladder closes on to the calculus. Pain may be accompanied by spasm from contraction of the membranous sphincter, and thus give rise to a suspicion of stricture. Before proceeding to pass a sound ask the patient how the stream flows. If it suddenly ceases without having been preceded by a gradual diminution of the stream, or is intermittent, and if he has suffered from neither gonorrhœa nor traumatism one may diagnose a spasm of the urethra. A sound meets resistance in the membranous portion of the urethra, and by continuous pressure, this is overcome and it enters the bladder. Gradual dilatation will aggravate in tuberculosis.

Essential cervical cystalgia is an affection with but obscure symptoms, which is observed in weak and impressionable patients, whose nervous systems have already suffered from other affections. The most characteristic symptom is painful contraction of the bladder muscles. Other visceral neuralgias may have preceded or accompany it and be symptoms of tabes dorsalis. There the characteristic symptoms will decide. Women are liable to vesical neuralgias from some affection of the genital organs, though tuberculous cystitis rarely involves the uterus. Hematuria is observed in this affection as well as in calculous cystitis, gonorrhœic cystitis and in tumor of the bladder.

In patients with stone in the bladder, as a rule only a few drops of blood appear after micturition, yet long walks, violent exercise or riding in springless carriages is liable to provoke abundant discharge of blood. All the urine is reddened, though the last drops are clearer. These attacks are of short duration and disappear on resting.

In vesical tumors the hematuria is frequently the only symptom. There is no pain, no apparent cause appearing generally, at night or in the morning on arising. It does not cease on going to bed, but it disappears as it came, suddenly, without being affected by either rest or exercise. It is abundant, of long duration and frequently re-occurring. It continues for a period of several days, a week or a month, separated by long intervals of remission, without any apparent cause to explain its capriciousness.

In gonorrhœic cystitis the hemorrhages are not profuse, and consist of a few drops of blood, expelled with the last of the urine. It soon disappears under the influence of instillations of a solution of the nitrate of silver. Hemorrhages supervening in urethral stricture are not abundant, and disappear with removal of the cause. After passing a sound, in a prostatic, a few drops of blood are liable to pass after its withdrawal. Varices of the neck of the bladder may cause hematuria, but they are very rare, and are only observed in persons of an advanced age. In tuberculosis of the bladder, hematuria may, for months or years, be the

only symptom. They are unaccompanied by other symptoms, appearing instantly and being but scanty, lasting for several days, disappearing and then reappearing after a certain time. Tuberculous cystitis is easily confused with stone in the bladder and the consequent cystitis, tumors of the bladder and gonorrhœic cystitis.

In calculous cystitis renal colic generally preceeds and cystitis develops late. The sound reveals a stone. In vesical tumors, which may be either benign and malignant, hematuria may be the only symptom for a long time and inflammation of the bladder develop later. In malignant tumor of the bladder the parietes undergo canceromatous infiltration, which may be detected by abdominal or rectal palpation. At the same time there are radiating and lancinating pains, which aid in diagnosis. Gonorrhœic cystitis follows acute gonorrhœa, the pus being carried back by injections into the bladder. It yields quickly to local treatment, and may be the point of departure of tuberculous cystitis, in predisposed subjects.—*Revista Medica de Sevilla*, No. 20, 1893.

The Face as a Guide in Diagnosis.—The physiognomy of the sick (S. M. Spalding, M.D., *Minneapolis Hon. Magazine*) presents innumerable shades of expression. These are certain facial lines and wrinkles which I believe are of positive value in diagnosis, but in the use of these it is important that we discriminate between those natural to the face, and those which are developed by disease. In childhood, however, there are few or none of the acquired lines found in adult life. We may therefore be quite sure of our indications in this class of cases.

The more important of these are as follows: The transverse rugæ, the oculo-frontal rugæ, the oculo-zygomatic line, the linea nasalis, the linea labialis, and the linea collateralis nasi.

The first two are situated upon the forehead, the first of which, the transverse rugæ, are formed by the action of the occipito-frontalis muscles, and are believed to be indicative of great pain from causes outside the cavities of the body. The next, the oculo-frontal rugæ, are vertical lines extending from the forehead to root of nose; they are formed by the corrugator supercilii muscles; they express distress, anxiety and extreme pain from some internal cause, cranial, thoracic or abdominal. They oftentimes indicate an imperfect crisis and in acute diseases often a fatal termination. I have observed this many times, and whenever I see these peculiar lines I am very solicitous for my case. In excessively severe headaches these two described rugæ may exist simultaneously, and when during the course of an acute disease the two meet abruptly, they denote a developing serious lesion of the brain or some of its coverings, and when I meet a case where this condition exists, I feel justified in advising of the grave nature of the disease and a consequent grave prognosis, a lingering case, if not fatal.

The linea oculo-zygomatica extends from the inner angle of the eye down and outward, crossing the face below the malar bone. This is believed to indicate a cerebral or nervous affection in children, in adult life masturbation or venereal excesses, and is frequently a very valuable aid in this class of cases.

The linea nasalis extends in a semi-curved direction from the upper border of the ala nasi downward to the outer margin of the orbicularis oris muscle; this line we find very marked in advanced cases of marasmus, inanition or such diseases as these simulate; in adult life, phthisis and atrophy. Where only the upper half, the linea nasalis proper is present, it is quite a reliable indication of intestinal disease, typhlitis or entero-colitis; it may be present in severe colic, although not marked, as the attack is remittent and of short duration. When the lower half, or linea buccalis, is alone present, it indicates some disease affecting the stomach. It is quite prominent in chronic dyspepsia, and when the two, as last described, together with the linea oculo-zygomatica appear

conjointly, they may be regarded as positive evidence of worms, and if the circumscribed red cheeks, the pallor of face around the mouth inside the linea nasalis, together with the bright, fixed and wild expression of eye are present, no further evidence of the presence of these pests is necessary.

The linea labialis extends from the angle of the mouth downward without marked termination till lost in the lower portion of the face. It is usual in those diseases which affect respiration, and is a more important diagnostic sign in childhood than in adult life; it may be observed in croup, both true and false, in acute laryngitis and capillary bronchitis; in adults most prominently in asthmatic subjects.

The linea collateralis nasi extends in a semi-curved direction from the ala to the chin. It is situated further out, outside the lines just described, and is a reliable guide to diseases of the thoracic and abdominal viscera; in fact it may be considered as positive evidence of a lesion in one of these regions, and when with the above is coupled the painful expression about the mouth, together with the peculiar fold on either side the mouth, we may be almost positively certain that the lesion is abdominal. It is very marked in typhus abdominalis, also phthisis abdominalis.

The above described are the more important and most frequently met by physicians, and to those who have not studied the physiognomy in this manner I would say, carefully note these lines, wrinkles and expressions; they will aid you in the diagnosis of many an obscure case, assist you in a prognosis that oftentimes will seem little less than inspirational to your patients or their friends.

THERAPEUTICS OF TRIONAL.

In an inaugural dissertation presented to the University of Freiburg, Dr. Otto Bakofen gives an interesting review of the extensive literature of trional, and calls attention to the unanimity that exists in the views of authors as to the excellent properties of this remedy. The advantages of trional consist especially in its reliability and efficacy in those conditions of sleeplessness which experience has shown it most difficult to obtain permanent results. This applies more particularly to simple agrypnia and the insomnia of persons suffering from mental diseases, or excitement due to alcohol.

In case of simple insomnia trional has always proved effective; while favorable testimony is more and more accumulating with reference to its utility in cases of alcoholic excitement, which are known to be rebellious to the action of other hypnotics. Among mental disorders, even violent maniacal excitement has been successfully controlled for a prolonged period. The morphine and cocaine disease has also been treated with excellent results by trional. Of especial note is the extremely favorable opinion expressed by Collatz, on the ground of his personal experience with it in cases of cardiac affections. According to his observations, patients suffering from serious heart lesions bear well the remedy, even when continuously administered, and experience considerable relief of the distressing symptoms. It should also be mentioned that trional acts in smaller doses than sulfonal, and also more promptly than the latter. Its use is rarely attended with after-effects, but these, if developed, are less marked than those observed from sulfonal, although the experience of the last few years has shown that with regard to both these drugs sequelæ always result from an improper method of administration, and can be readily avoided. The conclusions deduced by Dr. Bakofen from his experiments on animals are that trional is perfectly free from toxic effects, when employed in medicinal doses, and in the manner prescribed by competent clinical observers.

MISCELLANY.

—There are nine lepers confined in a hospital at New Orleans.

—Prof. Billroth's place in the University of Vienna has been filled by the appointment of Dr. Victor Ritter Von Hacker.

—Tell nobody what you are going to do, keep silent while you are doing it, and say nothing about it after it is done.

—Dr. Emily Winifred Dickson, of Dublin, has been elected the first female Fellow of the Royal College of Surgeons, Ireland.

—During the past twelve years nearly two thousand negroes in the United States have been shot, hanged, or burned to death by mobs.

—The following is a broad rule: Dropsy of the feet alone means heart; dropsy of the belly alone means liver; and dropsy of all the body means kidneys.

—Dr. Jurist says that as a general rule syphilitic mucous patches will be found to be placed symmetrically on both sides of the mouth and upper air passages.

—To cut short attacks of hysteria and to prevent their recurrence, Rosser recommends the hypodermic administration of one-tenth of a grain of apomorphine.

—It is stated that hereafter, the Connecticut State Board of Health will vigorously prosecute irregular medical practitioners, and if possible drive them out of the State.

—Prof. Keen says in probing for a ball, a probe with a porcelain tip should be employed, for when the probe touches the ball it will leave a black mark on it due to the lead.

The nuisance of flies in the house can easily be remedied, says the *Indiana Medical Record*, by exposing a little oil of bay in a saucer on the window sill. Not a single fly will enter the window.

—Dr. Carpenter, of London, says that so long as cases of scarlet fever are desquamating, just so long are they infectious; therefore it is impossible to place any limit to the duration of infectiousness.

—A diagnosis of ovarian trouble may sometimes be made out simply by the presence of a growth of hair on the face. There is a well-known relation existing between the ovaries and the growth of hair.

—It is claimed that five or six drops of a five per cent. solution of cocaine, placed in the external auditory canal, will abort threatened middle ear disease. If used four or five times a day for two or three days a cure is effected.

—The estimate is given in *Howe's Directory of Metropolitan Charities* for the present year, that not less than \$27,000,000 will, in 1894, pass into the coffers of the various charitable institutions having their headquarters in London.

—A recent English invention is the pulsimeter, a watch made especially for the use of physicians in timing their patients' pulse. It is constructed on the principle of the stop watch, and indicates the pulse rate on a dial in beats per minute.

—A German experimenter has demonstrated the equality of the amount of heat evolved by the combustion of a given quantity of nutriment and that produced by the same quantity taken into the human body, the two differing by only one per cent.

—The address of Dr. S. Wier Mitchel to the American Medical Physiological Association, with appended letters from prominent neurologists, will appear in the July issue of the *Journal of Nervous and Mental Diseases*, edited by Dr. Chas. Henry Brown, 25 West Forty-fifth street, New York City.

—We are told by an American physician in China, that "to assert that small-pox is a contagious disease would bring ridicule and contempt on Western medicine. Anti-vaccination societies do not flourish there among foreigners, for the reason that none of this class have long in which to tell the tale."

—Marfan and Monrot, two eminent French physicians, have recently shown that broncho-pneumonia and various other pulmonary maladies occurring in children, are due to infection resulting from chronic indigestion, often the result of incorrect feeding. This was found to be the case in thirteen out of eighteen cases.

—The herbarium of the late Isaac C. Martindale, of Philadelphia, comprising more than 200,000 different plants and ferns, gathered from every country in the world, has lately been presented to the Philadelphia College of Pharmacy, having been purchased from the estate for \$10,000, by friends of that institution.

—Permanganate of potash is fast becoming a popular antidote for all kinds of poisons. Not only is it efficacious against snake bite and morphine, but now an Alsatian, M. J. Austal, claims that it acts as an antidote for phosphorus, muscarine, strychnine, colchicine, oil of sabin and oxalic acid; at least in dogs, rabbits and frogs.

—Last summer Mary Goetz, of Lorain County, Ohio, caused John Nusing to be arrested on a paternity charge, claiming that he was the father of her unborn child. He settled with her for \$350. Later she gave birth to twins, and again caused his arrest, because there were two children instead of one. The jury awarded her \$287.50 additional damages.

—A German physician, Dr. Helbing, has used the electric current with success for the treatment of frozen noses, the poles of a battery being applied to opposite sides of the nose and moved about while a moderately strong current is passing. The immediate result in most cases is a reddening of the tissues, which may last several days. In some cases ten to fifteen applications are necessary.

—It is announced that strychnine is an antidote to chloroform poisoning. In a case where a would-be suicide recently swallowed two ounces of chloroform, one-twentieth of a grain of strychnine injected hypodermically, with the aid of artificial respiration, caused immediate improvement, and after another injection of one-thirtieth of a grain, the patient recovered, suffering no other evil effects than a severe attack of gastritis.

—The *Boston Medical and Surgical Journal* says that a physician's report of death from "heart failure" may be assumed to be that the case died either from some overpowering nervous influence, or from toxic, inflammatory or degenerative changes in the myocardium, suppurative or interstitial myocarditis, arterio-sclerosis of the heart, fatty degeneration following valvular or wasting disease or stenosis of the coronary arteries, or to acute primitive dilatation from prostrating fevers, chlorosis, leukemia, pernicious anemia, chronic malaria overwork and other depressing influences.

—The phenomenon known as "electric sunstroke" is now attracting special attention, by reason of its frequency among workmen employed in melting metals by means of the electric process. The intense voltaic arc between the carbon and the metal to be melted, emits rays, producing a sensation similar to that of a burn on uncovered portions of the body. There is frequently great pain, sleeplessness, and in some cases fever. The skin becomes copper-colored or bronzed, the eyesight is sometimes temporarily lost and followed by what is known as yellow vision, with a sensation as of sand under the eyelids. The most effective remedy is perfect rest in a subdued light, which causes the symptoms to subside in a few days, the copper skin peeling off, and the patient regaining his old condition of sight and health.